NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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CALENDAR FOR JUNE.

"For, lo, the winter is past, the rain is over and gone;
The flowers appear on the earth; the time of the singing of birds is come, and the voice of the turtle is heard in our land."

JUNE, in the months, is like our early manhood in life, crowded with fullness and strength, and flushed with activity and joy. The birds mate and sing, insects flutter from leaf to leaf, or sport in the warm evening rays; — flowers exhale their fragrant odors, and gentle airs waft them to us, and regale our senses as though from Hesperian fields. The plants stretch away from the ground and bathe in the sunlight, spreading their leaves, like so many hands, to catch the condensing vapors, or absorb the softly-falling showers. JUNE is not perfection, it is only the month of progress—the flush and promise of robust youth. A little later in the season will bring maturity in some plants, and that comes so near the next step in Nature's course, decay, as to break the charm. But JUNE suggests no decay—it is all promise—and arouses in any feeling heart, something of that benevolence and love which beams from its great Architect, and kindles and glorifies all.

That Solomon was a close observer of nature, is manifest from his writings, and we can imagine some of the sights and sounds which would greet him as he walked out nearly three thousand years ago, in the country about Jerusalem.

There was the fig-tree covered with young fruit, the odor of the budding grape vine, the song of the lark and the cooing of the turtle-dove, (not the veritable *mud-turtle*, as we thought in our juvenile ignorance,) the murmuring of the brook Kidron, no longer rushing in a torrent over its rocky bed, but flowing gently, as was its wont in summer—and the olive-trees on Mount Olivet clad in fresh green. Later in the season, he watched for the "Rose of Sharon" and the "lily of the valley." Ninety generations of men have since passed away, and yet such is the uniformity with which nature does her work, that we, of a world then unthought of, can find no words more appropriate than those of Solomon to express our joy when "the flowers appear on the earth, and the time of the singing of birds is come." And until the internal fires of our planet shall burst their shell, we are told "seed-time and harvest, summer and winter, shall not cease."

Yet, from this very harmony of nature, so wonderful when we think of it, we are apt to undervalue many of our blessings as commonplace. The sun rises and scatters the vapors away, bringing life and joy to the animal and vegetable world, yet, were it mentioned as a subject of gratitude, many of us would reply in the spirit of the man, who, when his attention was directed to the Falls of Niagara, merely said,—"Why *shouldn't* it fall —what hinders it?" But hear the exclamation of one who had endured a six months' winter in an Arctic region. "To-day, blessed be the great Author of light, I have once more looked upon the sun."

And this month of June—this gem—this *emerald jewel*, with which the year adorns herself, how many merely regard it as the *same old June* they have always known, the month that comes after May—and never give it another thought. But no, it is *not* the same June, and you may see in it wonders you never discovered before, if you will not insist on walking through the world blindfold.

"And what is so rare as a day in June?
Then, if ever, come perfect days."

And a few lines farther on in this beautiful poem by Lowell—

"Whether we look, or whether we listen,
We hear life murmur or see it glisten;
Every clod feels a stir of might,
An instinct within it that reaches and towers,
And, grasping blindly above it for light,
Climbs to a soul in grass and flowers."

Of course, our poet is using language figuratively, and does not mean to assert any heresies concerning the existence of mind; but men have actually held the doctrine which the above lines contain, if taken literally. For example—"The Americans believe that all creatures have souls, not only men and women, but brutes, vegetables, nay, even the most inanimate things, as stocks and stones."

We should premise that this was written when "Americans" meant *North American Indians*, and is not intended as a libel on the inhabitants of the United States. We presume our aboriginal predecessors did not found their belief upon any process of reasoning, but upon the sort of instinctive sympathy we have with plants and animals. The violet seems to you to have a gentle soul, which only expresses itself in a faint perfume, and should you crush it with your foot, you would feel like some cruel tyrant, who has immolated an unoffending victim. The tulip has a *regal* soul, which you would not insult by any indignity—but you see a gross weed among your corn, and you pull it up and fling it away, saying, "What business had it among my corn?" With animals the sympathy is still greater, and it is a difficult thing to draw the line between instinct and reason. It is well known that many animals evince what we should call a process of reasoning were it exhibited in man, and the more closely we watch them, the more wonderful it seems. Every one who owns a dog can tell anecdotes which will illustrate this, and if he does not actually believe that

"When translated to that upper sky,
His faithful dog shall bear him company,"

he half wishes the *paradise of dogs* were not a myth!

While we would not be supposed to advocate "the transmigration of souls," or any of its kindred doctrines, we do not believe that animals have credit for half the intelligence they really possess—and yet, they tell us, that man himself is only an oyster in a higher stage of development! (See Vestiges of Creation.)

Because a man is dumb, we do not suppose him to be destitute of ideas, and an animal, although he cannot tell us what he is thinking about, may have a language of his own, which we are too ignorant to understand. We know that our domestic animals appreciate kindness, and are capable of affection for us, and for each other. A gentleman tells us that the robins in his garden are acquainted with him. That when a marauding cat steals in among them, and he hears their cries of distress, he steps out from his study, and they, knowing that a friend has come, immediately cease their cries, and acknowledge his presence with a note of welcome.

It is curious to note with what simplicity the little child reads stories of animals. It does not surprise him at all, to be told that the wolf held a long conversation with Little Red Riding Hood, before he went and eat her grandmother; and that

"The frog he would a wooing go,"

appears to him the most natural thing in the world, though it may seem rather naughty that he should do so,

"Whether his mother would let him or no."

The child has *faith;* he believes in the angels that guard his bed while he sleeps, and that the insect carries in its own little bosom its private griefs and joys. We grown-up people shall be wiser and better in many respects, when we "become like little children."

There is not an insect so small, as to be beneath our notice. "Go to the ant, thou sluggard, consider her ways, and be wise."

There is the great brown caterpillar which you will find on your fruit-trees and rose-bushes about this time, (if you were not wise enough to exterminate him a month ago;) he is an ugly-looking creature enough, and a delicate lady would as soon encounter a bear or a lion—he is a nuisance to you, too, and you do not see what end he answers in creation. Well, we do not see either, and will only suppose he answers *some*—but even *he* is an object of interest to those who take pains to observe him closely. It is not merely that he will come out of that rough case one of these days, and will fan your cheek with his butterfly wing, but he lives in the midst of an organized community; perhaps he makes stump speeches to his fellow-citizens; he, too, has his three meals a day, and walks out for exercise, and finally, when his time has come, he seeks some secluded spot, weaves his own shroud, and appears no more in the form he first wore.

"And there's never a leaf or a blade too mean
To be some happy creature's palace;
The little bird sits at his door in the sun,
Atilt like a blossom among the leaves,
And lets his illumined being o'errun
With the deluge of summer it receives;
His mate feels the eggs beneath her wings,
And the heart in her dumb breast flutters and sings;
He sings to the wide world, and she to her nest,—
In the nice ear of Nature which song is the best?"

For the New England Farmer.

THE FARMER'S POSITION.

For many years the earth has yielded a rich reward to the faithful tillers of the soil in New England. The systematic, enterprising farmers in almost every community are showing evident signs of prosperity, particularly, those who are expending their income upon their farms and buildings, bringing around them many conveniences, enjoyments and comforts of life, which add not only to their wealth, but to their refinement and good taste.

There have been great improvements in our agricultural position during the last twenty years, and while we would acknowledge the press as the greatest instrumentality in awakening an interest in our farming communities, would be grateful for their untiring efforts to make their periodicals so valuable.

The science of agriculture has been spread before the people in a form, cheap, practical and useful, and the great body of farmers have become readers, thinkers, experimenters, and are still inquiring for more practical knowledge in the art of good farming.

What has been gained by all this? New fertilizers have been found out and applied to the soil; old, worn-out farms have been reclaimed; old buildings have been transformed, and located with taste and convenience, or new ones built. Fruit trees have been planted and nursed, and many are yearly gathering their first fruits as their reward of well directed toil.

How beautiful to look out upon our fields that our own hands have helped to subdue and enrich, smiling luxuriantly, the grass ready for the scythe and the grain for the sickle, and the corn and the after harvest making haste to fill the granary and cellar. These are heaven's gifts, the legitimate reward of toil, the indispensable products of the soil, which all men must have or die.

Who can but envy the good farmer as they look upon his possessions, his well-arranged farm-houses and out-buildings, his lots, good fences, gardens and margin of flowers, his fruit-yard and orchard, all witnesses of his prosperity and his pride in his profession. And then, how permanent is his income, and Providence his surety for seed-time and harvest.

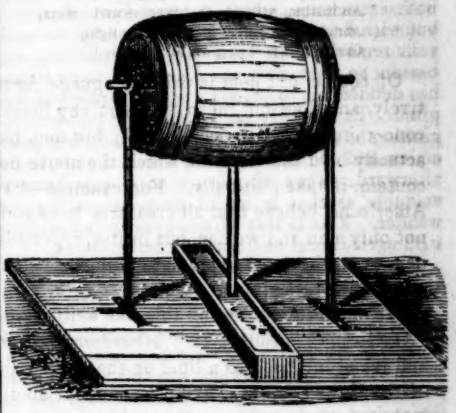
If the agriculturist prospers, it gives energy to trade and commerce. The vitality of every department of business centres here, cities extend their borders, manufacturing villages spring up along our streams and rivers, and our institutions gain strength as the soil becomes rich, and the tillers prosperous. Then for safety, happiness, prosperity, intelligence, usefulness, what other avocation compares with rural life?

In the commercial world, how numerous are the contingencies, what uncertainty enters into every enterprise. Perhaps to-day rich, and to-morrow poor, making others wretched.

Professional life is honorable if honorably pursued. Men rise to eminence and usefulness, and are indispensable to carry on the machinery of society and government; but the comparative number that are useful to any great extent is small, and the risk is great. None of these contingencies enter necessarily into the peaceful life of the agriculturist; but he should be learned in his profession, and when this is the case, how vast the field for study; it is no less than "the earth and the fullness thereof." BERKSHIRE.

April 8, 1859.

A BARREL FOUNTAIN.



Fowls will drink impure water, undoubtedly, when thirsty, but if they could always select, there is little question but they would prefer to visit a stream of pure water, or drink from a fountain of clear, cool water.

The above cut shows how easily any person rearing poultry, may prepare a fountain which will answer a good purpose, at the most trifling cost. All that it needs is to mount a keg on a couple of upright stakes driven into the ground, and extend a small tube from the cask to a shallow trough or pan, and allow the water to drip slowly from the cask into it.

THE GREAT FRENCH HENERY.

Some months ago we published an account of a stupendous experiment in rearing fowls in the city of Paris. The account was written with so much apparent accuracy of detail, and bearing so much the semblance of truth, that, although so much out of the common course of things, we published it, though we must confess, not until it had remained on our table many weeks. SAMUEL COOPER, Esq., of this city, recently wrote a mutual friend in Paris, Mr. Fleischman, in relation to the matter, who replies that the whole affair belongs to that class of bugs which we call hum—a humbug! Will the editor of *L'Agriculteur Practicien*, Paris, France, be kind enough to give us the facts?

☞ The town of Nelson, N. H., containing a population of about 650, has made fourteen and a half tons of maple sugar the present season. The number of trees tapped was 10,859; the number of trees in the town suitable for tapping, which were not tapped, is 10,883.

For the New England Farmer.

FRUIT TREES.

MR. EDITOR:—Nothing in the *Farmer*, for years, has been to me more instructive, and in general, more sensible, than the remarks from your own pen of Feb. 26, on pruning fruit trees. First, because in your reasonings you start, not with experience, which is ever more doubtful, but with first principles; and secondly, because your remarks come in exactly the right time and season, so that they are like what some writer has defined wit to be, viz.: a good thing well applied. Particularly am I pleased to find you beginning at the beginning, that is, with first principles, and considering what is called experience afterward. They who *begin* with experience—valuable as that is in its place—must forever wander. This is true of most things, as well as with agricultural and horticultural matters.

However, believing as I do, in starting right, and desirous that there should be no flaw in your reasoning, especially at the outset; and above all, as your argument is strong enough without the aid of analogies which are not according to truth, let me say that when you tell your correspondent that in cutting off a branch of a tree in the spring, we do not save the sap for what remains, any more than one would save a man's blood to strengthen the rest of his body by cutting off one of his arms, you forget or overlook a fact, which is both in accordance with fact and experience, but also with the first principles of physiology. Some of the best anthorities might be quoted on this subject. Feeble constitutions are often greatly improved by amputations, and it is according to nature that they should be.

Truly yours, W. A. A.

For the New England Farmer.

VALUE OF MUCK.

Explanations—Errors sometimes Useful—Evidence of Drs. Emmons and Dana, in regard to value of Muck—35 acres of Mowing keeps 40 Cows.

MR. BROWN:—I regretted the typographical errors in my notice of the climate and soil in Orleans county, Vt., and forwarded the corrections, which you promptly gave. The corrections had not been seen, I presume, by your correspondent at Brookfield, Vt., before writing his article, in which he represents me as making statements "so wide of the truth." I merely gave the estimate of my friend, who is one of our most reliable men in the county. I have no doubt that the stock mentioned by him was fully equal to forty ordinary cows. Let me assure your correspondent, that he will find nothing in the article alluded to by him, which "is wide of the truth," except what is made so by typographical errors.*

I shall not, however, seriously regret those, as they were promptly corrected by you, if my article and that of your correspondent shall call attention to the immense value of the "muck" or peat beds of Vermont. For the information of "W." and others, I will give a few extracts from the remarks of reliable writers. Mr. Emmons, one of the geological surveyors of New York, in his report on the third district, 1839, after describing several peat bogs, speaks of one in Warren county:—"It occupies about 60 acres; is upwards of 60 feet deep; is of an excellent quality and of easy access. The value of a marsh of peat may be estimated by determining the worth of a cubic yard or load, or any given quantity, and calculating the amount of peat which is contained in the area. The quantity of peat in a square rod of surface, and worked to the depth of 30 feet, would furnish 284 loads, which may be considered as worth 50 cents per load. Or, if we estimate it as worth only half so much, we perceive that 50 or 60 acres of it is almost invaluable, when favorably situated. Even a small bog in the centre of a farm might be employed to increase its value one-half. There are four purposes to which peat may be applied.

"First, as a manure. It should be raised in the fall, spread in the barn-yard, or placed in heaps and mixed with animal matter and lime. Placed under these circumstances, it is exposed to the frost and atmospheric agents, which produce incipient chemical changes, necessary to convert it into the nutriment of plants. This is especially the case when lime is added to it, which forms a soluble salt, the geate of lime, with a portion of the vegetable matter. It will not answer a good purpose when employed without preparations."

Dr. Emmons might have added, as a preparation of peat or muck—let it receive the urine of cattle in a barn cellar, or the night soil and wash of a house, or combine ashes, instead of lime, say two bushels to a common cart-load, and it is well prepared for use. Ten or twelve cords may be made thus by any common family, yearly, near the dwelling-house.

After stating the importance of peat for fuel and for producing gas-light, he adds:—"Perhaps it would be saying too much to assert that peat is more valuable than coal; but when we consider that for creating heat, it is not very inferior to bituminous coal, that it contains a gaseous matter equal in illuminating power to oil or coal gas, that its production is equally cheap, and in addition to this, it is a valuable manure, if properly prepared, its real or intrinsic worth cannot fall far short of the poorer kinds of coal."

Dr. Dana, in his Muck Manual, has given the analysis of both peat and cow-dung. He found more soluble geine in peat than in cow dung. He says, "The salts and geine of a cord of peat are equal to the manure of one cow for three months." "Departing from cow-dung and wandering through all the varieties of animal and vegetable manures, we land in a peat bog. The substance under our feet is analyzed and found to be cow-dung, without its musky breath of cow odor, or the power of generating ammonia." "Peat approaches dung moistened with the liquid evacuations of the animal."

If we moisten peat with the liquid evacuations of the animal, its value is greatly increased. In experiments reported to Dr. Dana, by Hon. Wm. Clark, Jr., of Northampton after giving the process of manuring corn land with several kinds of manure, he says:—

"The land was treated alike in all respects, except the different kinds of manure; all of which

* The estimate made of the stock wintered by me, as alluded to by Mr. Hall, in a late article on the climate and soil of Orleans county, Vt., I regard as fully correct.

Coventry, Vt., Jan., 1859. J. B. WHEELOCK.

was spread on the turned furrow and harrowed in before planting. The corn where the wood ashes and muck were spread, early took precedence of all the other parcels, and continued apparently much the best through the season. This manure was prepared by mixing eight bushels of ashes with two estimated tons of muck."

Within the limits of the calcareous mica slate regions of Vermont, which with the limestone regions on Lake Champlain, &c., constitute much more than half of the area of the state, are immense deposits, or rather formations, of sphagnous muck. In many instances the beds of what were once large ponds, are now filled with muck to a great depth. Many existing ponds are contracted to one-fourth, and some to one-tenth of their former area, and will eventually entirely disappear. When the peat or muck lies over shell marl, as is the fact in many locations, it is more valuable for manure than in other cases. Such marl may be readily converted to caustic lime by placing it over a pile of logs or wood, and then burning the pile. It is equally valuable for manure, when burnt thus, as if burnt in a kiln. The ponds made anciently by beavers, and now called beaver meadows, (not *barren*, as your types made me say,) very often contains both marl and muck. These are very numerous, and furnish an adequate supply to a large number of farms. I will furnish you with some experiments, made by myself and others, as soon as I may find it convenient. Yours, &c.,

Brownington, Vt., 1859. S. R. HALL.

MR. BROWN:—Allow me to enclose a copy of a line received from my friend Wheelock, since writing the letter enclosing this.

Yours, &c., S. R. H.

REV. S. R. HALL:—Since forwarding a hasty line to you to-day, and having read the article by "W.," in the last *Farmer*, calling in question the accuracy of your statement, it has seemed to me that you might like to receive an account of the stock I am wintering at the present time. I do not now mow more ground than when I made the statement to you some years ago—not over thirty-five acres. If any one doubts whether I am wintering stock equal to forty ordinary cows, let him come and see it. I have now—

1 yoke of 7 foot Oxen.
10 Cows.
8 Yearlings.
8 Calves.
3 Horses, (large.)
3 Colts, 1, 2 and 3 years old.
47 Sheep of the large breed.

One of my neighbors, I think, keeps more stock, in proportion to the amount of land he mows over, than I do. My grain, &c., is about the same as formerly. Yours, &c.,

JOSIAH B. WHEELOCK.

Coventry, Vt., Jan. 31, 1859.

REMARKS.—If our intelligent correspondent would be a little more careful in his chirography he would have to regret less errors. For instance, if we should select his words "with," "barren," and some others, and place them without any connection with others, we think it would puzzle him to tell what they are.

For the New England Farmer.

BUCKWHEAT AND WIRE WORMS.

MR. EDITOR:—I have long had it in contemplation to communicate to you what I observed in a gentleman's corn-field, last season, in the fore part of July. It was four acres of Indian corn, two acres growing and two acres trying to grow, upon a piece of land, all of which, until that year, had always, as the owner expressed it, been so infested with wire worms as to render the growing of Indian corn, or other crops, "a very steep up-hill business." But when I observed it, only one-half the field was giving signs of the worms, while the other half presented that beautiful appearance which always characterizes a luxuriant corn-field. All parts of the field had been treated alike that season, but the year previous, the part of the field presenting a healthy appearance, had produced an abundant crop of buckwheat, no buckwheat having been sown on the other part. The difference between the two portions of the field was very marked—the crop on that part where no buckwheat had been raised being past all hope of recovery.

Now I thought the above facts of sufficient importance to excuse me for a self-introduction to you, in my first newspaper article, knowing, as I do, your anxiety to give any information, however remotely benefiting the farming interest.

If the farmer *can* be exterminating so destructive an enemy to his thrift as the wire worm, and at the same time, and on the same soil, be producing a profitable crop, he surely ought to know it, and know *how* to do it. I do not know as the buckwheat had anything to do with driving off or starving out the worms, but it certainly looks like it. At any rate, I have given facts as I have seen them, and farmers can form their own opinions; they will lose nothing, if they have a nest of wire worms which they would like to break up, by applying the buckwheat theory.

Leyden, March 5, 1859. DAVID MOWRY.

For the New England Farmer.

FRUIT TREES—LIMITED DURATION.

The celebrated THOMAS ANDREW KNIGHT, of the London Horticultural Society, one of the most scientific cultivators in Europe, whose attention was directed to the unhealthy condition of the old varities of fruits, particularly the apple, came to the conclusion that we could no longer raise healthy tree, and good fruit from the old sorts. Professor LINDLEY, although differing from President Knight's theory, says, "However much we may differ from him, no man living now before the world, can be said to rank with him, in that particular branch of science, to which his life was devoted." Thiking that the opinion of the practical *Octogenary Rodgers*, on this theory, would be interesting to your readers, I have ventured to transcribe it. He says, "The Golden Pippin is one of the most esteemed and hardy fruits. There is, however, an idea prevalent that this country was about to lose this fine fruit forever. In Mr. Knight's Treatise on Orchard Fruit, the doctrine was first broached, that all our varieties and subvarities of fruits, have but a temporary existence. They are raised from seed, flourish for an uncertain number of years, and after arriving at their

maximum of health and fertility, gradually sink to decay, and at length disappear. Taking this idea as a rule, the Golden Pippin was judged to be in this last stage of existence; and it was predicted, that not only were the old full-grown trees to disappear, but all the young ones worked from them would perish also.

"These failures, I think, are caused by a careless choice of grafts,—by working them on improper stocks, and planting them in old worn-out soils, instead of in fresh, well trenched, loamy soil; this latter opinion was the more feasible, because there were many middle-aged trees in different parts of the kingdom which were in full vigor and bearing; and although young plants in old gardens and orchards were unthrifty, such as were properly planted in newly broken-up ground, if worked on the best stocks, succeeded as well as ever. This being the opinion of the author respecting the failure of the Golden Pippen, and other old sorts, he gave the subject his best consideration, and set about proving how far his own experience of 40 years was well or ill founded, and arrived at the following conclusion, viz.:

"If the stocks are raised from the most healthy stocks, properly treated, and worked with the most healthy *moderate sized scions, cut from the top of sound, healthy trees*, and when fit for transplanting, be placed on well trenched, light, fresh loam, having a dry bottom, they will assuredly prosper. On the other hand, if the grafts be taken indiscriminately from any tree or from any part of a tree, they will, nine times out of twelve, be in some respects or other defective, and particularly, if they be not afterwards planted in their favorite soil, where their *wood would not be sufficiently ripened.*" J. M. I.

Salem, Mass., 1859.

For the New England Farmer.

HUNGARIAN GRASS.

In answer in part to inquiries frequently made by correspondents of the *New England Farmer*, in relation to Hungarian grass, permit me to state a single experiment I made with it last season. My son in Illinois sent me a small parcel of seed which he brought from Iowa. I sowed it on rather light, dry ground in low condition. I waited till midsummer, and not being able to see a single plant of the grass, I raked it over, and sowed some turnips and late peas. Towards autumn, I discovered a few plants on the borders of the lot which I presume was the Hungarian grass. It grew ten to fourteen inches high, with a colored head—purplish, I think, full of seed, a specimen of which I enclose you. Whether the seed does not vegetate till late, like our wild millet, that starts up on our stubbles after the grain is reaped, or whether the seed was picked up by a flock of strange birds, I saw one day upon it, I cannot tell. This Hungarian grass did not appear to be much superior to our wild millet or barley grass, as we used to call it when I was a boy, only the heads were larger. I have seen millet growing far superior to this grass in every respect, and that would afford a good crop of seed and fodder. I shall try it, however, again, on better land, to ascertain what another experiment will do. RUFUS MCINTIRE.

Parsonfield, Maine, 1859.

For the New England Farmer.

FLOWER GARDENING.

BY ALBERT STACY.

[Read before the Concord Farmers' Club, March 30th, 1859.]

The cultivation of flowers is adapted to persons in every condition of life. The high and the low, the rich and the poor, all can partake of its advantages. It may not pay in dollars and cents, like corn and potatoes, but it affords a higher gratification which money cannot buy. Some persons seem to have the impression that the body, only, is to be attended to; therefore, they will slave themselves from morning till night, throughout the year, not merely to keep body and soul together, but to pile up the almighty dollars. Such persons will ask, What is the use? Does it pay? Does it afford meat and drink? I answer no, only to the mind; and such individuals, having no great stock, are certainly in want of no great amount of food for it. These remarks apply only to those who decry the cultivation of flowers, and who look upon the time employed upon them as wasted. Whatever will give gratification to others, is worth doing. Selfish men do not often cultivate flowers. But the social man, who likes to have others about him enjoy themselves, will appreciate the pleasure which a neatly arranged flower garden affords to all persons of taste. It is an employment equally adapted to ladies and children, as to men. Let any of our young ladies employ themselves an hour or two a day in the flower garden, and we should not hear of so many dilapidated and dyspeptic spinsters, whose principal enjoyment is gossip and bohea. It would give a fresh bloom to their cheeks, an elasticity to their step, which would make them fit companions to some of our faint-hearted bachelors, instead of a drag to their existence. Downing, in one of his essays, says "that he has a neighbor on the Hudson, a lady, whose pleasure grounds cover many acres, whose flower garden is a miracle of beauty, and who keeps six gardeners at work all the season. But there is never a tree transplanted, that she does not see its roots carefuly handled, not a walk laid out, that she does not mark its curves, no matter what guests enjoy her hospitality. Several hours every day, are thus spent in out-of-door employment."

I suppose the reason why so many of our young men leave the farm and seek employment in the cities in mercantile life, is, that they have acquired no taste for farming; and no person will succeed in an employment which they do not like. If you can cultivate a taste for flowers in the child, you will have a stepping-stone, which will lead to something more. Give him a small plot of ground, show him how to plant the seeds, and you will soon see that he will take a lively interest in the first appearance of the flowers, and his play, as well as work, will be to take care of them; he will soon evince a taste for cultivating the smaller garden fruits, such as strawberries, raspberries, currants, then the various fruits of the orchard will claim his attention; the whole will result in a taste for farming which will prevent his roaming away to seek employment in commercial life, at which so few succeed. Make the labor of the farm attractive, and you can commence in no surer way than to teach a child

the cultivation of flowers. It can be done at little trouble and expense. You can have flower-beds bordering the walks that lead to your house. Yon can set out in them flowering shrubs, like the Deutzia, Althea, Rhododendron, Japan Pear, Spiræa, and the most beautiful of all, the Rose, with its infinite variety of color and fragrance. You can have flower-beds under your windows, which, with a little care, will furnish you with bouquets to adorn your rooms in summer; your dwellings would be much improved by training up some of the many varieties of running roses, and Honeysuckles, at the corners and up the pillars of the piazza.

If you wish a flower garden on a little more extensive scale, a plot of ground, which every farmer can spare, 100 feet by 60, would be amply sufficient. Make a bed 4 feet wide round the whole of it, then a walk 3 feet wide; then let your boy or girl who has been at school, apply practically their geometrical knowledge, and draw a circular bed at each end, and an oval in the centre, with a walk round each; border each bed with a narrow strip of green turf, fill the walks with gravel and roll them down hard. When all this is accomplished, you will have a simple arrangment of a flower garden, which, if well done, will be attractive, before a seed or bush is planted. There is no necessity for an extensive variety; leave the rare and costly plants to those who have money to buy them. By a judicious selection of the right kinds, you can have an abundance of blossoms the whole season. You will want, of course, some of the bulbous-rooted plants, such as the Snow Drop, Crocus, Hyacinth, Tulip and Crown Imperial. These ought to be planted in the fall from 2 to 4 inches deep, and they will be among the earliest blooming flowers we have. As soon as the frost is out in the spring, you can set out some flowering shrubs. You will want the Azalea one of the most beautiful plants; the Calycanthus, the flowers of which are of a dark brown color, and very fragrant, resembling the odor of ripe melons; the Japan Quince, the flowers bright scarlet, and blooming in April; the Deutzia, which is a plant of easy cultivation, having a profusion of white blossoms which are highly fragrant; the Rhododendron, which bears an abundance of rose-colored flowers, spotted with yellow or orange blossoms, in June or July, and wants shade and humidity; the Spiræa, of which there is a variety, all beautiful; the Spiræa prunifolia plena and Reeves's Spiræa, are two of the best; the Weigela Rosea, which ought to have a place in the smallest collections; it blooms in April and May, and bears an abundance of fine rose colored-flowers, which hang in graceful bunches, from the axils of the leaves and ends of the branches. It is easily raised from cuttings, which strike readily. During the spring months you will certainly want some varieties of the Rose, the queen of flowers, some of the Moss Roses, some of the red, white, scarlet and yellow. You can have a choice from over 3000 varieties. There is no flower which better repays the cultivation bestowed upon it than the rose. The infinite variety, in color, fragrance, and shape, and ease with which it is cultivated, serve to render it worthy of a place in every one's garden. Any one who will procure a dozen of the finest varieties, will become slightly touched with the rose fever. In order to make it flourish, the soil must be deep and well drained. Give it plenty of manure; the richer you make the ground the better. Mr. Rivers recommends as a specific stimulous, what he calls roasted turf, which is easily made by paring sods from the road-sides, and half charring them. It acts like magic upon the little spongioles of the rose, making new buds, and fine fresh foliage start out very speedily. For climbing roses, none take precedence of the Baltimore Belle and the Queen of the Prairies. Downing says, that "if he could have but one rose, his choice would immediately fall upon the Souvenier de Malmaison, from its constant blooming habit, large size, hardiness, beautiful form, exquisite color, and charming fragrance." I have found it, however, rather tender, and the buds liable to blast. May is the most suitable month for the general sowing of flower seeds; many varieties do better to be started in hot beds in April, and transplanted to the border, the latter part of May. The following varieties of annuals ought to be in every ones collection: Ambrosia, German Asters, Balsam, Canary bird flowers, Candy Tuft, Coreopsis, Cypress Vine, Eschscholtzia, Pansy, Dwarf Rocket Larkspur, Lupins, Mignonette, Nasturtium, Nemophila, Petunia, Drummond Phlox, Portulacca, Wall Flowers, Schizanthus and Verbena. The above mentioned will give you a succession of bloom the whole season. One of the most valuable of the bedding-out plants is the verbena, especially the scarlet flowered. Their dazzling, brilliant scarlet flowers cannot be exceeded by any other plant yet introduced. It blooms from May to November. There are many other varieties of every color and tint, excepting yellow and blue. The Asters and Balsams do much better to be started in a hot-bed in April, and transplanted to the border in May, about one foot apart. Of the biennials and perennials you will want the Canterbury Bell, the different varieties of the Pink, the good old-fashioned Hollyhock, Honesty, Sweet Williams, Wall Flowers, Larkspurs, and Phlox. You will likewise want the Dahlia, one of the most brilliant and perfect of flowers, sporting in every variety of tint. The Pæony, a genus which contains many magnificent flowering plants, and the Dielytra Spectabilis, which Breck says is "the finest herbaceous perennial in cultivation."

But there is no end to the varieties which a person can have, if so disposed.

I will conclude by giving a formula for a liquid manure, which I have found very efficaceous in making plants grow; it is likewise well adapted to vines and trees. I obtained it from Mr. Bull. Put a wheelbarrow load of peat into a half hogshead, fill with water, add two pounds of potash to the mixture, and water once a day in dry weather.

STRENGTH OF CAMELS.—The Galveston *News* states that one of the camels in that city kneeled down and received a load of five bales of hay weighing 1,400 pounds, which it raised without he least effort, and walked away with apparent ease. In there native country the average load for a full grown camel is some 800 pounds, with which they perform long journeys over deserts with but little food or water.

KETCHUM'S ONE-HORSE MOWING MACHINE.

The idea is now pretty well established in the public mind, that the mowing machine will very generally come into use, and that it deserves to be ranked among the valuable labor-saving machines of the age. The timid and conservative have had their day of doubt and criticism; but while they have been doubting and wasting human thews and sinews, active and progressive minds have tested and re-modelled some of the machines, until they have produced one which will accomplish the work quickly, cheaply and effectually.

Such, we believe, will prove the one illustrated at the head of this article. We cannot yet speak of it with entire confidence, because nothing short of actual field labor, under several trials, can inspire such confidence. But from the partial trial we have given it, we can say that it comes nearer our idea of what a mowing machine ought to be, than any we have yet seen.

We shall continue our tests of the machine in the earliest grass we can find, and content ourselves for the present, in showing the reader what the proprietors of the machine think they have accomplished.

After repeated and long-continued experiments in the field and manufactory, the proprietors have succeeded in producing a one-horse mowing machine, which for simplicity of construction, lightness of draft, ease of operation and the low price at which it is sold, must recommend itself to every New England farmer.

The machine is so constructed as to combine great strength and durability with the smallest possible weight; the cutters are so formed as to prevent entirely the liability to clog, so troublesome in some machines; it may be stopped and started in wet or lodged grass, without backing; the seat is conveniently placed, so that the operator can ride with perfect ease to himself and the horse; it has a wheel and lever attached, by which the operator can instantly raise the cutter-bar six or eight inches, to pass over a stone or other obstruction, and while raised, the machine may be drawn to and from the field, &c. The cutter-bar being always on a line with the axis of the driving-wheel, this machine operates well on rough or uneven ground, where other machines cannot mow. A very important improvement in this machine, is that it can be instantly thrown *out of or into* gear, by means of a short lever, which can be operated with ease by the driver on the seat. The machine is constructed entirely of iron, and its parts so adjusted and guarded against accidents, that it requires but little more attention to keep it in working order than the common scythe.

For full particulars of the form, construction and mode of management of the machine, see advertisement in another column. The price of the one-horse machine is $75, and the two-horse about $100.

PEAR TREES.

Why is it that the pear tree does not flourish in every locality?

This question is often asked. It has been attributed by some to their situation or proximity to the ocean; and among others, by Downing. This theory he could not sustain, and hence, a few years after, he rescinded it, and remarked, that "a larger observation of the effects of the composition of soils, convinced us, that much of what we attributed to climate, was simply to a want of inorganic, or mineral manures in the soil." We apprehend that the want of proper soil in the first place, and the method of applying so much animal manure, *not composted*, in the second, to be frequently the difficulty in cultivating the pear tree. Regarding the proper dressing of land for fruit trees, our design is to follow nature in her modes of enriching the soil, or in other words, to use vegetable and mineral manure more generally in the application of leaves in compost with wood ashes, and peat and shell lime.

Another objection we should have, to the use of unfermented animal manure, is, that it stimulates, and as a consequence of this over-supply or forcing, induces a sort of plethora, or tenderness in the tree, from a too rapid and forced growth; hence we prefer to see a moderate and regular growth. We believe that good pasture land is better fitted for fruit trees, than that which has been long under the plow, because it is not exhausted of that decomposed vegetable and mineral matter, which is fitted to be the food of trees; the wood also ripening better. We have long observed that young trees, particularly the cherry, if making a great growth in the summer, was extremely apt to die out in the following winter, owing, undoubtedly, to its succulent growth, and want of ripeness in the new wood.

For the New England Farmer.

A NEW AND USEFUL FERTILIZER.

I have used, for several years a mixture of plaster and urine, at planting, to give corn a start. I first saturate the plaster with urine, then spread upon a tight floor, stir and turn with a hoe occasionally, and, when dry, pulverize. I have sometimes mixed dry plaster with the mass, without waiting for it entirely to dry, before pulverizing. In this case more should be used in a hill. About a great spoonful (heaped,) to a hill, of the strongly saturated mass gives the corn a fine start. It should be *scattered* in the hill, and not lie in a heap on the corn, as that would injure, and sometimes entirely prevent the growth.

A friend suggests, that, as *calcined* plaster has several times the absorbing power that the uncalcined has, it would be far better to mix with urine. How is this? Will not the calcining process expel some of the valuable properties of the plaster, and render it less efficacious as a fertilizer? Will it have the power to fix the ammonia of the urine?

Every farmer, who has an iron boiler, may calcine his own plaster at a trifling expense; and if it will absorb four times the amount of urine, and retain the ammonia, I think it must make a very powerful fertilizer, especially if the urine is allowed to become putrid before mixing.

Framingham, March 15, 1859. E.

Remarks.—We do not learn, upon inquiry, that any advantage will be derived from the plaster for the purposes you speak of, by calcining it. That process will cost something, and that cost had better be expended in the purchase of more plaster.

For the New England Farmer.

TRANSPLANTING TREES.

The supporting of trees after setting is a more important operation than it is generally considered. There are many methods or ways in which this is done; sometimes by pegs driven into the ground from which ropes are fastened and carried to the tree, but more generally by poles set against them in a triangular form. When newly-transplanted trees are swayed about by strong winds, the formation of new roots is prevented, or often destroyed, and cavities formed at the base, admitting too much air, which deranges the roots. The best plan for supporting a newly-set tree is the following:

After digging the holes to their proper depth and circumference, I then with a crow-bar make a hole in the centre of the place to receive the tree, into which I insert firmly a short pole or stake, that shall at the other end reach nearly to the branches. I then place the tree along its extent; and then with a wisp or collar of some soft material, such as straw, moss, or sea-weed, bind it around the point of pressure, and tie it firmly. This plan of setting maintains the perpendicular position of the tree, and I commend it to those setting out either fruit or ornamental trees. For the latter I consider it admirably adapted, as trees in our cities and towns are so often destroyed by being swayed about by boys, and sometimes by the horns of cattle.

Salem, April, 1859. J. M. L.

Steeps for Seeds.—The above subject has for a long time engaged the attention of many experimenters, and with various results. Strong solutions of any of the well-known materials used, are apt to injure the germs of seeds, while weaker solutions, being held by the spongy coatings, frequently not only secure earlier germinations, but by a timely supply of necessary pabulum, secure vigorous plants, which, as a necessity of proper conditions in their early stages of growth, yield larger returns. Among the materials used we would enumerate the following:—Saltpetre, Sulphate of Ammonia, Carbonate of Soda, Soluble Phosphate of Lime, etc. We should be glad to learn from those who have used steeps, what has been their success.—*Working Farmer.*

For the New England Farmer.

PRUNING APPLE TREES.

MR. EDITOR:—I have just been reading the remarks of Mr. PUTNAM, and the editorial on this subject. I have given considerable attention to it, and differ somewhat from yourself in the time of pruning, as a matter of convenience. I think there are weighty objections against pruning in June or July. While the fruit and foliage are on the trees, it would make tearing work to pull out a limb after it was cut off; I think it would damage the young fruit it must necessarily touch. Another difficulty would be in dropping the branches upon the grass or vegetables that may be under the trees; and still another in going around with a cart to collect the brush. Then, again, in June and July we are too fully employed in keeping down the weeds, or picking the early fruits, and in haying, to spare the time. Such has been my experience in a long course of extensive farming operations, and are sufficient reasons to deter me, and I think most people, from pruning at that time.

I have come to the conclusion that the winter is the best time, and we usually have comfortably weather enough between the falling of the leaves in autumn, and the first of March, to accomplish this work. Is not this the season for trimming grape vines? I sometimes prune after the first of March, in which case I would recommend that all limbs above one and a half inches in diameter be cut, say one foot from the trunk; then in June go round with a sharp saw and cut the stubs very smooth, and pare the edges with a sharp knife, and perhaps paint a little; but I do not like oil on trees. OTIS WITHINGTON.

Brookline, Mass., March, 1859.

REMARKS.—An orchard that has been properly tended, requires no operation that will injure the fruit, tree, crops under it, or ox teams to carry off the limbs; and an orchard that needs a severe pruning of large limbs, certainly ought to have it done at the proper season of the year, even at the expense of inconvenience, and all the other objections urged. November pruning will answer very well, but June is better. Where a person raises an orchard himself, he ought to be able to do all the pruning in it necessary *with a common pocket knife*, except in cases of accident to the tree by wind or otherwise.

CROCODILES.

After burying the eggs in the soil, there to be matured by the sun, the female visits, from time to time, the place in which they are secreted, and just as the period of hatching is completed, exhibits her eagerness for her offspring in the anxiety with which she comes and goes, walks around the nest of her hopes, scratches the fractured shell, and, by signs which resemble the bark of a dog, excites the half-extricated young to struggle forth into life. When she has beheld, with this sort of joy, fear and anxiety, the last of her offspring quit its broken casement, she leads them forth into the plashy pools away from the river, and among the thick underwood, to avoid the predantory visits of the father, whose palate delights in nothing more than the flavor of his own young, which he eats remorselessly on every opportunity. In this season of care and watchfulness over them, she is ferocious, daring, and morose, guarding with inquietude her young, whenever they wander. She turns when they turn, and by whining and grunting, shows a peculiar solicitude to keep them in such pools only as are much too shallow for the resort of the full-grown reptile.

EXTRACTS AND REPLIES.

PRUNING AND TAP ROOT.

I have read the remarks of "J. M. I.," on the trimming of trees, the circulation of sap, and the agency of leaves, &c. &c., but have failed to learn from him, with any precision, the proper time and manner to trim the limbs from apple trees; if ever this should be done. I am free to confess that I have little faith in the trimming process, as ordinarily performed. The handsomest and most productive apple trees I have ever seen, have grown up among the rocks, with very little modification from the hand of man. I should as soon think of pricking the veins of a child, when in full health, to make him grow, as to cut off the limbs of a tree to promote its growth. Any wounds to either are unnatural, and cause an extraordinary effort in nature to counteract them; therefore, I disapprove entirely the cutting of the tap root of young trees, when setting them in a nursery, in order that the roots may spread more extensively on the surface, and be the more readily taken up, when wanted for the orchard. Nature, in starting the tap root down below the surface, designed it for the support of the tree, and whoever would have his orchard perfect, should be cautious about interfering with its natural supports.

March 21, 1859.

AGRICULTURAL KNOWLEDGE.

I have recently been perusing the "Transactions of the Massachusetts Society for Promoting Agriculture," and I find that from its foundation it was zealous in getting agricultural knowledge in some form before the people; they resorted to such expedients as were available, which were widely different from the manner of disseminating such matter now. If that interest were taken in the diffusion of agricultural knowledge at the present time, that there was formerly, would it not materially change the aspect of many rural homes?

It may be said, we have a large number of various agricultural works and newspapers; this is all very well, but it does not suffice. We want a system by which the community may be drawn together to have a talk or hear occasionally a lecture on agriculture. Such gatherings and discussions would produce the most beneficial results. J.

Winchester, 1859.

PORTABLE IRON GRIST MILL.

Subscriber, Orwell, Vt., will find who sells this mill by looking at the advertising columns of the weekly *Farmer*.

WHAT IS GRASS.

Noah Webster, the highest authority we have, (Ed. 1844, at New York,) says it is, in common usage, herbage, the plants which constitute the food of cattle and other beasts—the plants from which hay is made, such as herdsgrass, red-top, clover, and many other species—all which are included in the family of the grasses." But another W., wiser than old Noah W., has recently grown up, and says "clover is not a grass." (See Boston *Courier* of Tuesday, March 22.) Who shall decide when doctors disagree? I say, let farmers themselves decide. Ask any twelve you meet, and I hesitate not to say, that eleven of them will promptly say that clover is a grass—ask the learned Secretary of the Board of Agriculture, and he will tell you that clover is a grass, for he has already said that in print. This hypercritical quibbling, of persons who know much less than they think they do, is vexatious and annoying to practical men. * *.

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ALEXANDRIAN CLOVER.

I have received a package of seeds from the Patent Office, and among them is one marked "Alexandrian Clover, *Trifolium Alexandrinum*, (from Egypt.) Sow early in the spring."

My query is, whether it is a flowering plant designed for garden culture, or should it be sown broad-cast for seeding down ground like our common clover? J.

Winchester, 1859.

REMARKS.—The Alexandrian clover is described in the books as one of the forage plants.

—

LANDS IN MAINE.

Good arable lands can be purchased in Franklin county, Maine, for five or six dollars per acre, where farming produce can be raised in abundance. I advise people to go there, instead of the West. J. B. JOHNSON.

Salem, N. H., 1859.

—

TO CURE SPRING KNEES IN HORSES.

In a past number of the *New England Farmer*, I noticed an inquiry, as to what would cure a horse having sprung knees. I had a horse about two years ago, whose knees were very badly sprung, and I cured him in a few weeks by using "Dr. Streeter's Magnetic Liniment." I would recommend it in other cases of the kind.

JAMES S. THOMPSON.

Kingston, Mass, 1859.

—

TO CURE WARTS ON CATTLE.

Dissolve potash to a paste, cover the wart with it for half an hour, then wash it off with vinegar. The cure is sure for man or beast. A. BRIGGS.

Deerfield, Mass., 1859.

—

HOW TO HULL CORN.

Place a strong bag with three pints of wood ashes in it, in a boiler with three quarts of corn in water. Boil until the hulls will slip off by rubbing them with the hand. When rinsed, boil the corn again in fair water till it is sufficiently soft. ASA BENFIELD.

Centre Brook, 1859.

TARRING APPLE TREES.

I am tarring my apple trees to prevent the canker worm from ascending. Can I mix any thing with the tar to prevent it from becoming hard too soon?

Is tarring the cheapest and most effectual way of preventing the canker worm?

A SON OF POMOLOGY.

Westford, April, 1859.

—

HOW TO HULL CORN.

A good housewife, who has often read and acted upon the receipts in the "Ladies' Department" in your well conducted monthly, has often asked me, "What is the best way to hull corn for family use?" Can you give her the information? SUBSCRIBER.

Quincy, March 12, 1859.

REMARKS.—Some obliging lady will undoubtedly tell us.

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PLANT PURE POTATOES.

Plant potatoes that are not specked with rot, or any disease, and my word for it, you will have good, sound potatoes; this is no fiction, for I have raised them for two years past, and had on old or new land sound potatoes.

—

TOBACCO.

Where can I find a practical work on tobacco? B. B.

Middletown, Ct.

REMARKS.—Do not know. We hope not anywhere.

EXPERIMENTAL FARMS.

Much responsibility rests on those who undertake the direction of one of these establishments. We are glad to learn that our neighbors of Essex have already taken the bull by the horns, and appointed a committee of their experienced citizens to shape affairs on their Society's farm in Topsfield. We learn Messrs. Fay, Merriam, Loring, Williams and Dodge are planning for the use of their farm. We have confidence that these gentlemen will venture upon no plans of operation that will not be practically useful. Mr. Brown, the working man on the farm, is young, energetic and ambitious. He is already favored with a contract, that will enable him to use his produce at home, thereby bringing it to a good market, and increasing his means of fertilizing his grounds. The employers are ambitious of improving the appearance and conveniences of the farm. It is so centrally situate, that it probably will, ere long, be made *the focus* of all the society's operations. As was once said by the renowned blacksmith of Hinsdale to Mr. Webster, when he was about to address his fellow-citizens at Worcester at a political meeting, familiarly slapping him upon the shoulder, "Much is expected of you, Daniel, to-day." So say we of our friends in Essex.

For the New England Farmer.

HIGH FARMING---PROF. MAPES'S FARM ---SUPERPHOSPHATE.

BY JUDGE FRENCH.

Not many weeks ago, we published a pretty careful criticism upon the farming operations of Mr. Sheriff Mechi, of Tiptree Hall, England, one of the highest farmers of that country, and our conclusions were, that although Mr. Sheriff Mechi might make money in England by underlaying 170 acres of poor land with iron pipes, and pumping through them all his manure with a steam-engine; by underdraining five feet deep, and doing other things accordingly, yet that his own statement showed that with American prices for the labor he charged, and American prices for the crops he credited, he would run his farm ruinously in debt. His success, we said, results through the low price of labor mainly, the price there being but about half our New England prices.

In the New York weekly *Tribune* of March 26, 1859, is an account of the farm of Prof. Mapes, near Newark, New Jersey. The account is very interesting to farmers, because of its encouraging results. The farm contains 121½ acres, and the statement shows that the expenses upon it for the year 1858 were $3,152 60, and the income from it was $11,627 88, leaving a nett profit of $8,475 28, after paying all expenses and a fair rent for the land! Only 33¼ acres of the farm was in cultivated crops, the rest being grass and woods. The account below gives the items of income and expenses, with a balance which may challenge competition on either side of the water.

Having some acquaintance with Prof. Mapes, having seen his farm, though not in the growing season, and having met his foreman, Mr. Quin, both on and off the farm, and talked with him about the farm operations, we feel some confidence in our ability to form a correct opinion of this statement.

That the professor is a man of great scientific knowledge of agriculture, and of wonderful tact in his application of science to the culture of his crops, everybody who sees him and his farm will at once admit. He understands the theories of farming, and his farm shows that he makes his knowledge practical. He raises the very crops that pay the best in his market, and he gets the largest crops and the highest prices. His farm is not indeed, a regular *farm*, but rather a market garden, a nursery, a seed establishment, and a fruit garden.

Yet these are departments open to many of us, and why cannot we make profit of them as well as he? To be sure, we cannot expect to get *eight and twelve dollars per hundred* for pears, if we could raise them in any great quantities, but our impression is, that nobody can show in this country better dwarf pear trees than Prof. Mapes.

He is the inventor of Mapes' Superphosphate of Lime, and it is not strange that his rivals in patent manures should detract from him and his successful farming.

Five thousand tons of this manure have, some seasons, been manufactured at the works in which he is largely interested, near his place. His farm is manured almost exclusively, with this preparation, and acres were pointed out to us, on which were the finest fruit trees, and beds of strawberries, besides the ordinary crops, which had received, for many years, no other manure.

The professor stated, in our hearing, at the New York Farmers' Club, that stable manure could not be sold in his neighborhood for $1,50 a cord, to be hauled one mile, because the superphosphate is cheaper, and his neighbors who were present, suggested no doubt of his correctness. Yet, at Exeter, it costs us $5,00 a cord, besides hauling, and this is probably an average price in the larger towns in New England.

After all our *buts*, and *yets*, and apologies for Prof. Mapes's astonishing profits, there is a large balance of credit to be divided between his mode of culture and his superphosphate. "How does he get so large crops at so little cost?" is the question. His explanation is found in three points,—thorough drainage, deep and fine culture, and the use of superphosphate.

He underdrains with tiles from four to five feet deep; he subsoils eighteen or twenty inches deep, and works his root and hoed crops constantly in summer, with a little subsoiler drawn by one mule, and with the horse-hoe; and he applies to every acre, at the start, 600 pounds of superphosphate and a less quantity in after years, according to the crop. That this manure does wonders on his farm is not to be doubted. We have ourselves tried it several years, and always with favorable results, some of which have been published. We propose to continue our experiments the present year with one ton of the nitrogenized superphosphate now on hand.

And a word by the way upon this subject may not be amiss. We do not believe that farmers should in general purchase their manure, unless they are selling their crops. If they are, they must replace them by bringing on to the land the elements of fertility which they have carried away. This can only be done by buying some or other of these fertilizers. Superphosphate of lime is admitted everwhere to be, excepting guano, the very best of fertilizers, and guano is difficult to apply properly, and is not adapted to all crops. The best farmers in England buy im-

mense quantities of superphosphates for their root crops in particular, and many of our farmers use it upon their potatoes and corn. Prof. Mapes has no secret as to his mode of manufacture, but publishes it as follows:

"The Improved Superphosphate of Lime was first invented, and was composed of 100 pounds of bone-dust dissolved in 56 pounds of sulphuric acid, to which was added 36 pounds of Peruvian guano and 20 pounds of sulphate of ammonia; 100 pounds of this mixture were found to be equal in application, both in power and lasting quality, to 185 pounds of the best Peruvian guano.

The Nitrogenized Superphosphate, which is found to be practically superior to the Improved Superphosphate, is composed of equal weights of improved superphosphate and dried blood ground."

Probably any chemist in the country will pronounce a fertilizer consisting of the above elements, valuable for almost all cultivated crops, and we trust our farmers, in their progress in agriculture, will not forget that there are manures besides what are found in their barn cellars—manures which contain no seeds of weeds, which are light of freight and cheap of application. In a garden of vegetables, we should hardly know how to raise our crops, without a bag of superphosphate at hand. A cabbage will fatten on it, like a pig on corn meal, and a cauliflower will head two weeks sooner, by the application of an ounce of it, at the time of transplanting. We have tried every variety of fertilizer, and have more faith in Mapes's Superphosphate than in any other manufactured article of the kind.

We give the statement from the *Tribune*, as to Prof. Mapes's farm. Can any man show a better one? Does farming pay, or does it not?

"The following excerpt from the farm book of Mr. Patrick T. Quinn, the manager of the farm, which has been duly certified to by him as correct, will show the actual sales and expenses of the last year:

SALES FROM APRIL 1, 1858, TO APRIL 1, 1859, INCLUSIVE.

Timothy Hay, 50 tons	$750 00
Salt Hay, Sedge and Black Grass, 91 tons	564 20
Asparagus	40 00
Beets, 500 bushels (some sold by the bunch)	250 00
Greens (Spinach, Sprouts, &c.)	108 00
Cabbage, early and late Cauliflower	675 00
Kohl Rabi	19 50
Carrots, 900 bushels at 43c	391 30
Celery	195 29
Corn, shelled, 560 bushels at 85c	467 50
Corn, sweet	60 00
Egg Plants	51 00
Lettuce	120 00
Melons	43 50
Onions	149 20
Parsnips, 250 bushels at 37½c	93 75
Peppers	6 00
Squashes	55 00
Rhubarb	310 00
Radishes	65 00
Salsify, (Oyster plant)	25 00
Tomatoes	45 00
Turnips, 1,200 bushels, at 35c	420 00
Potatoes, (mostly sold for seed,) 700 bushels, at $1	700 00
Seeds, (all kinds)	2,520 16
Hot-bed and cold frames	315 17
Rhubarb Plants, Grape Vines, Raspberry, Blackberry, Currants and Strawberry Plants	1,017 00
Grapes, Strawberries, Raspberries and Blackberries	375 00
Pears, sales—1857—$305 / 1858—496 } average sales	510 40
Fruit Wines on hand	470 00
Corn Fodder—soyho stalks and green rye	240 00
Hogs, milk and butter	386 00
Two choice calves	50 00
Total	$11,627 88

EXPENSES.

Eight workmen, eight months, at $20	$1,280 00
Five workmen, four months, at $20	400 00
19,825 lbs. Superphosphate of Lime, at 2c	396 50
Rent for 58½ acres, at $8	426 00
Rent for 52 acres, salt grass, at $1,25	65 00
Taxes	31 50
Wear and tear of Tools	100 00
Use of team, at $3 per day	453 60
Total	$3,152 60
Total receipts	$11,627 88
Deduct expenses	3,152 60
Net profits	$8,475 28

For the New England Farmer.

MASSACHUSETTS APPLES.

The apple is more emphatically the farmer's fruit than the pear. They can be raised with more certainty of a crop, particularly if here in Massachusetts we pay more attention to the cultivation of those sorts which are indigenous, or have been raised on our soils; for however strange it may appear, I have, for many years, observed, that the best apples in our markets have been those sorts which were first produced in our region. In a report to the Essex Agricultural Society some years since, I made the above statement, which was afterwards corroborated by Henry Ward Beecher, who, in an article on the culture of the apple, remarked, that the best apples in the West were those varieties which originated in the "Great Valley of the West." With us the Hubbardston Nonsuch, Baldwin, Roxbury Russett, Mother, Porter, Williams' Favorite and Danvers Winter Sweet are among our best fruits; all these are of Massachusetts origin. From farther observation on this subject we would repeat the assertion, that a fruit, (particularly the apple,) *originating* on a given soil, will generally be superior in that locality or section, than in any other. We have in our mind the Newton Pippin, Esopus Spitzenberg, Red Doctor, Pennocks, Red Winter and Red Gilly Flower, fruits which are considered first-rate in their native habitats, as they undoubtedly are, but when grown upon our soil, are inferior to those sorts named above. We say the same of the imported varieties generally, with the exception of the Gravenstein of Germany, and the Ribston Pippen of England; the former does equally well with many of our varieties, and the latter *occasionally* on rich soil.

Salem, Mass. J. M. L.

WINDHAM COUNTY, Vt., AGRICULTURAL SOCIETY.—The annual Fair of this society will be held at Newfane, Oct. 5 and 6, 1859. Officers, O. S. Howard, President; Alonzo Dutton, Ira A. Pulsifer, Vice Presidents; W. A. Stedman, Secretary and Treasurer.

For the New England Farmer.

DISEASES OF HORSES.

I have a very sick colt which was in good order when attacked. The first symptom of disease, I noticed about six weeks since, when he seemed to lose his balance in the stable and fell. He was a little stiff in the hind parts, and gradually seemed to lose the free use of his limbs, staggering some, but quite frolicsome when out with other colts. He grew worse until three weeks ago, when he would lie down in the stable and groan. When on his feet he acted like a poisoned lamb, except frothing at the mouth; three weeks ago, I bled him in the mouth, and physicked thoroughly, but to no purpose. He still lies in his bed of straw perfectly comfortable. But when I get him up, he suffers exceedingly, breathing like a wind-broken horse. After active exercise his bowels are in a good state, and have been all the time. His food during the winter has been poor hay and corn-stalks, with occasionally a swill mess. I have rowelled him, and for the past three weeks have fed him nothing but bran mash and new milk to drink, from eight to twelve quarts per day. It is a horse colt twenty-one months old. He has appeared to me through the whole time as if his spine was affected. It is very difficult for him to use his limbs. I think he will live some time yet, if the new milk holds out. There have been a number of horses sick in town similar to this, and most have died. W. D. SEARL.

REMARKS.—We publish the above in hopes to draw out some remedy for this disease, and to learn whether it prevails in other places. It is always difficult to suggest remedies to patients that are not seen. We can think of nothing to suggest in this case.

APPLES FOR EXPORTATION.

We believe that apples are to become a more staple article for exportation than they have ever yet been in New England. Our soil and climate are, we apprehend, better adapted for the permanent cultivation of this fruit than the deep alluvial soils of the South and West. We find that there, particularly in the West, they are more subject to what has been denominated frozen sap blight or canker, which we think may be attributable to their deep soils, the roots running below the action of the sun and air, so necessary for the health and longevity of trees; we find here, on the contrary, apple trees in a healthy state, that are half a century in age. In New England we have a more shallow soil; hence trees grow slower, the wood ripening better than upon rich, deep soils, where they are forced to grow later, the wood being succulent, the leaves remaining long upon the trees, rendering them liable to be overtaken by the winter, before the sap is sufficiently elaborated to stand a severe freezing. Hence we believe, that as Massachusetts can never be made a grazing or grain-growing region, compared with the South and West, and as the apples here are equal, if not superior, on the whole, to those of any other section, we would recommend to the farmers of Massachusetts to cultivate the best keeping varieties of good winter apples, as a source of income more sure of a safe return than that of Indian corn; for while the South cannot compete with us in the cultivation of the former, neither can we with them, in the production of the latter. One gentleman in the city of Salem exported during a few weeks last fall, four thousand barrels of winter apples, all grown in the county of Essex, principally in the town of Danvers.

For the New England Farmer.

RINGING, SUMMER PRUNING, AND THE TRUE SAP OF TREES.

The Isabella Grape may be accelarated in ripening, and produce larger berries, by a process of ringing the shoots in June and July. Vines treated in this manner produce fruit nearly twice the usual size when girdled an inch in width; the shoot operated upon to this extent, dies of course, the following winter; but on the contrary, when the ring of bark is taken off, only one-half an inch in width, the fruit grows larger, but the bark coming together before the winter, a connection is formed, and the shoot is not thus destroyed. In explanation of this effect we would say that the crude sap of the vine, after passing up through the *Alburnum* or sap wood to the leaves, where it is concentrated, returns through the nerves of the leaves, to the base of the leaf stock, and then downward between the bark and young wood called *Cambium*. This is the true sap of trees; it is wholly generated in the leaves, descending to the extremities of their roots, depositing in its course the matter which is successively added to the tree. When the enlargement and more early maturity of the fruit be the object, the operation of ringing may be performed as above; but if made on the small branches of the new wood, the fruit does not acquire a proper state of maturity; it should be done on the previous year's shoots. The effects of ringing are more obvious on the grape, pear and apple than upon some fruits; we have attempted it on the peach tree without any seeming effect. If, by the agency of leaves, the gases extracted from the atmosphere by these organs, and the juices drawn from the earth by the roots are mixed, assimilated and rendered subservient to the tree, thereby increasing its growth and perfecting its fruit, the question arises, Is summer pruning beneficial or injurious? We apprehend that it is improper; for by this process, we diminish the resources of the tree, in thus removing so many leaves, as we must, of necessity, in this operation. The above, if true, shows the folly of taking off the leaves of any fruit tree, to accelarate the ripening of its fruit.

The *Alburnum* is the outer coating of young wood, often called sap-wood. The *Cambium* is mucilaginous matter found between the bark and young wood. J. M. IVES.

Salem, Mass., 1859.

For the New England Farmer.

ABOUT FRUIT TREES.

I observe by the report of the Sixth Legislative Agricultural Meeting, that the chairman made some most excellent remarks on pruning apple trees; and I regret that want of room, or any other reason, prevented the editor of the *Farmer* from publishing them at length. I do not know that I have an idea on this subject, that has not been derived from some agricultural or horticultural publication, or from some judicious cultivator of fruit; but I wish to add my testimony in favor of what I believe to be the right way of pruning trees.

It has become an established rule with me, never to cut a branch from a vigorous growing apple tree, if it can be avoided, except when so fully in leaf that the sap will not flow from the wound. By this course the trees will entirely escape those terrible black spots below the wounds, which always disfigure and often kill the bark for a considerable space. I should, in general, prefer June to July or August, to do this work, as the earlier it can be safely done, the more time will be given for the wounds to heal the first season, and any exposed branch will become more gradually habituated to the scorching suns of midsummer.

The remarks of Mr. Lake, at the same meeting, are almost equally in accordance with my experience. If we train up our young trees in the way they should grow, there will be little need of cutting large limbs at all. If we should find it necessary to remove such, the stumps should be carefully protected from the weather, so as to keep the scar dry and sound as long as possible. Whether fruit is really injured by too much exposure to the hot sun, is a matter to be tested by observation, but the brown, leathery appearance of the naked branches does not indicate a salutary effect from exposure to it. Many a sturdy old tree, I have no doubt, has received its death from the hand of the grafter, who, to give his scions a good start, has deprived the branches of both their customary shade and the foliage requisite to keep up a brisk flow of the sap.

The manner of pruning trees is a no less important matter. A rough giant of a man, in cowhide boots, well garnished with nails in the heels, and his red right hand armed with an axe, or coarse-toothed saw, is a vision ominous of much evil, when seen among the branches of a tender barked fruit tree. Like the friendly bear in the fable, who in his well meaning efforts to brush a fly from the nose of the sleeping man, crushed in the organ entirely, he means good and does evil. Devastation is as sure to follow in his track, as in that of a flight of locusts. It should be a cardinal rule never to set about the work carelessly or without a plan. There are many questions to be decided before we can do it in the very best manner, such as what are the natural habits of the tree; is it designed to cultivate the land with other crops, or to spread the trees so near the ground as to occupy it entirely with them; is the exposure such that high trees will suffer particularly, both in the branches and fruit, from strong sweeping winds; and then, how with the material before us can we obtain just what we desire; how much can we cut now and yet leave enough to protect the rest from the scorching sun, and afford sufficient work for the roots to keep them in a healthy condition. Having decided all these matters, and any others that may happen to have a bearing on the case, we are prepared to begin our work.

For tools, I want a fine-toothed saw and a thin bladed knife, both in the finest order, and a step ladder. The branch should be supported with the left hand, while cut, so as not to start the bark at the place where the instrument comes out. When using the knife, which I rely upon almost solely, on young trees, I press the branch to one side so as to take off all resistance from pressure on its flat sides. In this way limbs an inch or more in diameter may be easily cut through. My next step is to examine the wound, and, if it is not all right, pare it carefully till the surface is smooth, and the bark adherent all round. When the operation is done I wish it to appear to be a wound on the side of the branch or trunk, rather than a stump projecting from it. If the pruning is done as soon as the tree is fully in leaf, it will be found at the end of the season that a handsome circle of new wood is formed all round the wound, and the wood within is smooth and sound and by the end of the second season, it will be entirely healed, unless quite a large one. I next take those branches which will have to be removed at another time, and cut in their extremities so as almost entirely to check their growth. Finally, if I find any branch, which I propose to have remain permanently on the tree, is assuming an undesirable form, I endeavor to correct it by clipping or otherwise as is requisite. By following this plan regularly, I find my trees improving from year to year, and I hope eventually to get them in good shape, and have no large limbs to cut off.

I wish to remind those persons, who are anxious lest we should raise too many apples, that there are at least 500,000,000 people living on our globe in countries where apples do not grow; and, that probably 499,000,000 of these would like this fruit if they could get it; and moreover, that by keeping apples at a temperature just above the freezing point, they may be kept sound for any desirable length of time, and transported to the most remote parts of the world. Apples have been sent to California packed in boxes among cargoes of ice, and it is as easy to send them to the East Indies, and other parts of the tropical world. In view of these facts I would appeal to the patriotism and the pockets of the people of New England, and ask them why they cannot grow apples as well as ice enough to supply a large part of the world with both these luxuries.

H. LINCOLN.

Lancaster, Mass., April 11, 1859.

STARTING CUTTINGS IN MOSS.

It is a very simple operation, and at the same time one that requires some little skill and care, to strike a cutting. Cuttings of grape vines, currants, and of many shrubs and flowers are usually started in sand, and some think brick dust the best material for this purpose. We see in the January number of the *Gardener's Monthly Advertiser* a quotation from a German periodical, in regard to the use of swamp moss or *sphagnum*,

which it says has been used in Holland instead of earth or sand, for the purpose of striking cuttings, and up to this time we have heard of scarcely a single failure, and its success has been most complete. This *sphagnum* (or swamp moss) should be well dried and reduced to powder, by rubbing it between the hands. Fill the cutting pots or boxes with it, and after watering it well, insert the cuttings. It dries less quickly than earth or sand, and preserves an uniform humidity, and the root fibres are developed more rapidly. It is said that some plants, that in sand require several months to root, only require "three or four weeks in the moss."—*Maine Farmer.*

LANDSCAPE GARDENING.

There are few things that mark the progress of civilization and the arts more than the expression of a true taste in architecture and gardening. So long as men are indifferent about the appearance of the house they live in, and the grounds that surround it, they will rarely express a true taste in anything else. This is true of communities and nations, as well as individuals, —and as we do not remain stationary in anything, but either progress or recede, it is evident, we think, that if there is no advancement in the particulars we are considering, there will be little in anything else.

Improvements in our buildings and grounds, if conducted with economy, and in accordance with our business and ability, are not, by any means, a mere gratification of taste alone. So far as architecture is concerned, they give employment to several classes of industrious persons, while the high cultivation of plants are so many examples for all, of what the soil is capable of producing when proper means and skill are applied to it. When buildings are constructed upon true architectural principles, and with a highly cultivated taste, and the surrounding grounds are in keeping with them, the combination not only gratifies the eye, but adds greatly to the beauty and richness of the country.

We have been led to these remarks by finding upon our table a new edition of *Downing's Landscape Gardening and Rural Architecture*, it being the sixth edition, enlarged, revised and newly illustrated, with a supplement, containing some remarks about country places, and the best methods of making them; also, an account of the newer deciduous and evergreen plants, lately introduced into cultivation, both hardy and half-hardy. By HENRY WINTHROP SARGENT.

The work contains nearly 600 pages, is printed on thick, fine, white paper, and is illustrated by numerous elegant engravings on steel, wood and stone; some of them from the pencil of Mr. MOORE, one of the publishers.

No other work in this country, on these topics, has anything like the merit which this possesses, if, indeed, there is one in any other country. Published by A. O. MOORE & Co., 140 Fulton Street, New York, and for sale by Crosby, Nichols & Co., 117 Washington Street, Boston.

For the New England Farmer.

HUNGARIAN GRASS.

MESSRS. EDITORS:—In your last issue I noticed you made two remarks, editorially, about Hungarian grass; that statements about its productiveness were somewhat conflicting, and that it was doubtful whether the seed will ripen in all parts of New England. Circumstances and events which led to the first are about the same as might be expected about any other new thing. In answer to your second remark, I will give you the result of an experiment I made the last season, without any comments, at this time, for the benefit of not a few most deeply concerned to know the truth in the matter of Hungarian grass.

Between the fifteenth and twentieth days of June, 1858, I cast up the soil in this cold, but pleasant, Green Mountain town, and sowed twenty-nine quarts of the seed. The latter part of September I threshed from seven and a half tons of hay gathered, two tons and eighty pounds of well-ripened seed, measuring eighty-five bushels, of which I send you a sample.

I noticed you recommended to farmers to try it sparingly. I recommend to every farmer to try it liberally. I shall sow no oats this year, but shall sow at least fifteen acres with said seed.

WM. RICHARDS.

Richmond, Mass., April, 1859.

For the New England Farmer.

THIN AND THICK SOWING.

MR. EDITOR:—In my communication of January 9, I gave a short account of my method of using green manure, and growing corn. After harvesting my corn, I plow in the fall from eight to 10 inches deep, and in the spring generally sow to oats and "seed down." Inthe spring of 1856 I sowed on five acres seven bushels of oats; threshed with a machine; result, 256 bushels. In 1857, sowed on 1¼ acres two bushels oats; result, 108 stooks; threshed out part in the fall, yield nearly a bushel to the stook; the rest threshed out at different times, the exact yield I cannot tell, but judge not far from 100 bushels. In 1858, sowed on 1¾ acres 2½ bushels; mowed for fodder ¼ acre, leaving 1½ acre; threshed with a machine; result, 105 bushels. I sow as near as I can, 1¼ bushels oats, from 12 to 16 quarts herds grass, and six to eight pounds clover, per acre. The richer the ground, the less oats and more hay seed. Now for my reasons. By sowing oats thin, they do not lodge so bad; the heads are larger, and better filled, give heavier oats, do not shade the ground so much, and where they do lodge, do not give so thick a coating over the young grass, as to kill it near so much as if sowed thicker.

Oats are not generally considered so good grain to "seed down" with, as wheat or rye, but if any one will try oats at the rate of 1 to 1½

bushels per acre, according to the richness of the ground, they can judge for themselves. In the spring of 1856 I planted 1½ acres of corn; in the fall harrowed the ground and sowed ½ acre to winter rye, and sowed Timothy seed in the fall, and clover in the spring, as soon as the snow was gone. In the spring of 1857, sowed the rest of the piece, 1½ acres, as before described, and last season mowed for the first time, and could see no difference between that "stocked" with rye or that with oats. My manner of sowing is to go over the ground with a light harrow to smooth it down, then sow the oats, then use a cultivator harrow, sow the hay seed, and cross harrow with a light harrow of 30 teeth; then roll the ground, which leaves it in a fit condition for the scythe. The richer I make my ground, the more hay seed I want to sow, thereby avoiding a coarse quality of hay, which is generally the result of the first year's crop. I do not consider a great crop of oats of so much consequence as a good crop of grass from five to eight years following. Now, Mr. Editor, I do not wish to be understood that my method of procedure is better than other farmers', but my motto is, let every one read, (and write too, for others to read,) judge, practice, and decide for himself. W. C. WHITE.

Barre, Vt., April 5, 1859.

AMERICAN GUANO.

We recently alluded to this subject, and said that we should recur to it again. After the Peruvian guano was introduced, it could be purchased for several years for $40 a ton; the price was gradually increased, until now the exorbitant charge of $65 a ton is demanded—and this increase of price has been continued when shipping freights have been very low. It is a complete monopoly, and we hope the American people will not encourage it. In 1856, the sales of the Peruvian guano amounted to $17,000,000, and the average, for some years previously, was about $15,000,000.

Some two or three years ago, certain islands, named Baker's and Jarvis's islands, in the Pacific Ocean, some five thousand miles from any land, were discovered by two American citizens, named Michael Baker and Thomas D. Lucas. A company was formed under the title of the *American Guano Company*, and the interest of the discoverers purchased. The importance of a cheap supply of guano to our agricultural pursuits attracted the attention of our government, and the Department of State entered into negotiation with the Peruvian Government, proposing the payment of $10 per ton for all guano imported thence into the United States. This negotiation failed, and the Republic of Peru, through their agents, has obtained the monopoly of guano in our markets, which has increased in price from $40 per ton to its present price of $65 per ton!

The following analysis of Baker's Island Guano, by L. D. Gale, M. D., Chemical Examiner of Patents in the United States Patent Office, inasmuch as it agrees with analyses made by other men eminent in the scientific world, will give a correct idea of its constituent parts:

Organic compounds yielding ammonia, &c.	9.940
Combined Water	2.500
Carbonic acid from organic compounds of lime	.600
Bone phosphate of lime, and bone phosphate magnesia (containing phosphoric acid, 38.67)	83 200
Sulphate of soda	1.263
Common salt	1.615
Loss	.818
	100.000

In connection with this analysis, Dr. Gale remarks:

"Guanos are of two kinds; those in which the ammonia-yielding products predominate, as in the best Peruvian guanos; and those in which the phosphates of lime and magnesia predominate.

"The first kind is produced in regions where there are little or no rains, and the second in regions where the rains wash away a large part of the organic or soluble portions, and leave the insoluble parts. Such are the Mexican guanos of the W. I., and those on the Islands of the Pacific Ocean, above named.

"If we heat to redness an ammonia-yielding guano, we volatilize 65 to 70 per cent. of organic matter, capable of yielding ammonia and other volatile products which constitute the body of this class of guanos. What remains after extracting the ammoniacal and phosphatic compounds, is of comparatively little value, as it is chiefly alkaline salts.

"What effect has such an article on the soil on which it is spread? It stimulates to an unwonted degree; and causes it to put forth all its strength to force the growth of plants, as alcohol stimulates the animal to unusual exertions for the time, but which finally exhaust the system. So the stimulating guanos force the present crop at the expense of the future strength of the soil.

"Every farmer who has experience, knows that when he has once used guano for his crops, its strength is exhausted the first year; and if he would continue to grow crops, he must continue to repeat his guano.

"But what is the result with the phosphatic guano? The analysis shows that more than 80 per cent. of these guanos consists of the phosphate of lime and of magnesia, in an insoluble state, or in just such a condition that the roots of plants will take up, and appropriate so much of the salt as is requisite to perfect the same."

An analysis of this guano made by Drs. Scaffor and Craig, under the superintendence of Prof. HENRY, of the Smithsonian Institute at Washington, and which was made under directions from the Government, exhibits similar results to those given above by Dr. Gale. Accompanying their analysis is a detailed statement of the peculiar qualities of the article, from which we make the following extract:

"As to the worth of these substances, we can best represent it by comparison with bones, which

are nearer to them in composition than any other common material.

"Bones, however, are valuable as manure, by reason of their mineral matter, phosphate of lime, &c., and also by their animal matter. This latter, by slow decomposition, furnishes, year after year, something to the plant in the shape of ammonia.

"The phosphate of lime being an important constituent of all our cereal grains, is, by itself, a desirable addition to a soil. This can be easily understood when it is remembered that nearly the whole of the bones of all animals is originally derived from the bone earth in vegetable food.

"The specimens we have examined, contain a larger per centage of phosphate of lime than bones contain; they have also rather more phosphoric acid than bone earth, and are in a finely divided condition, so that the useful matter can be readily taken up when applied to crops."

The samples brought were under the charge of a Government officer, CHARLES H. DAVIS, Commander U. S. ship St. Mary's, and delivered into the hands of the Government chemists. Analyses have been made by several other chemists than those already referred to, and with similar results.

We wish to be perfectly understood in this matter by the reader. We do not recommend this guano, or any other specific fertilizer, to the exclusion of a single shovel full of home-made manure. All that can be made from the natural resources of the farm *must be made.* But this being sadly deficient every where, after our best efforts have been exerted, we recommend this guano *as a help,* to enable us to gather more prolific harvests of grain and roots, and restore our exhausted pastures and fields to better crops of grass and hay. With this view, we do not hesitate to recommend its use sparingly, by a large number of persons.

The general agent of the company is A. C. Lombard, Esq., Boston, Mass., who will supply pamphlets giving a more full account of it than we are able to. The sub-agents are Messrs. Nourse, Mason & Co., Quincy Hall, Boston.

DAIRIES AND BONE MANURE.

An English paper in commenting upon this subject, remarks that the Cheshire dairy farmer, by the free use of bone manure laid on his grass lands, makes his farm, which at one time, before the application of bone manure, fed only 20 head of cows, now feed 40! In Cheshire, two-thirds or more, generally three-fourths, of a dairy farm are kept in perfect pasture, the remainder in tillage. Its dairy farmers are commonly bound to lay the whole of their manure, not on the arable, but on the grass land, purchasing what may be necessary for the arable. The chief improvement, besides drainage, consists in the application of bone manure. In the milk of each cow, in its urine, in its manure, in the bones of each calf reared and sold off, a farm parts with as much earthy phosphates of lime as is contained in half a hundred weight of bone dust. Hence the advantage found in returning this mineral manure by boning grass lands. The quantity of bones now commonly given in Cheshire to an imperial acre of grass land is about 12 or 15 cwt. This dressing on pasture land will last seven or eight years; and on mowed land about half that period. But the grass land once boned and kept under pasture is never so exhausted as to be as poor as it was before the application.—*Moore's Rural New-Yorker.*

For the New England Farmer.

PROFITS FROM POULTRY.

DISCUSSION AT THE CONCORD FARMER'S CLUB.

March 24, 1859.—JOHN BROWN, 2d, stated that on the 1st of January, 1858, he had 50 hens. In April he bought eight more. In June he sold 20 hens, that weighed from eight to 12 pounds per pair, for 14 cents per pound. He sold 478 dozen eggs, and raised from 60 to 70 chickens. He received for eggs and chickens, $125. Cost of keeping, $70. Made manure worth $10. He covered the droppings once a fortnight with loam. January 1st, 1859, had 60 hens. Has sold since 150 dozen eggs. His hens are of mixed breeds. He feeds on oats, barley and wheat, corn and cob meal, or shorts, new cabbage, pumpkins and squashes, rotten apples, boiled potatoes. He does not keep corn before them. Thinks this will make them too fat, and they will not lay as well. Keeps scraps by them. Sometimes boils a young calf and gives them, pounds up the bones; keeps some kind of food by them all the time. Thinks it was more profitable last year to sell eggs than to raise chickens; some years it is most profitable to raise chickens.

J. P. BROWN thinks it is best to raise both, as a hen that raises a brood of chickens, will lay about as many eggs as one that does not.

E. WOOD, Jr., has 112 hens. When he began to keep them, he was desirous to know how much it cost per day to keep a hen, and he weighed and measured the food for a few weeks. He finds the cost about one-third of a cent. Hens require a mixture of grains; if they have but one kind, barley is the best. They must have a warm place, and sunshine. Does not let them run out in cold weather; he did not let them out till March; his hens have improved under his keeping, and laid well. He takes two pounds of scraps at night, and puts into a pail of hot water, and lets it stand till morning; then puts in cob meal and water, enough to fill the pail; this makes them a breakfast. He gives barley or some other grain in the forenoon, and corn at noon; he gives a good deal of meat, and pounds up the bones with a sledge hammer; they eat the bones greedily: he keeps oyster shells pounded where they can get at them; he has had as many as 60 eggs a day from 112 hens. This is more than the average.

The manure is valuable. He mixes with fine mud; thinks he shall have from $30 to $40 worth of manure, enough to go on 10 or 12 acres of corn, putting a portion in each hill. Much depends upon the condition of hens in the fall. Hens that he had of Mr. Farmer, had proved his

best layers, owing to their being well kept in the fall. If pullets are left to run at large in the fall, and not fed well, they will not lay as early, nor so much.

J. B. FARMER said: Last year he had 20 hens, and raised 150 chickens; did not know how many eggs; his hens cost him one-half a cent per day. This year he had 30 hens; in January he had 50 dozen eggs, minus three eggs; he got 30 cents a dozen. Bought 150 pounds of beef, and kept it by them while it lasted; he pounded up the bones; the hens eat pounded bones greedily. He gives them warm dough once a day in cold weather. If we keep hens for the eggs only, he thinks the Poland, or Black Spanish, or Bolton Greys, are better than the larger breeds. It is profitable to raise chickens; his hens range over a 10 acre pasture; he keeps scraps by them. Hens should be treated gently; hens that are perfectly tame, will lay twice as many eggs as wild ones; he thinks hen manure better than guano. Last year he had enough to manure three acres of corn in the hill.

D. TARBELL said, if we raise chickens for market, it is best to have them early, and it is important that they should be nicely dressed, if we would get a good price. Chickens that are carefully cleaned, and nicely put up, will often bring nearly twice as much as others that are equally good, but carelessly dressed.

Mr. Editor, here are some directions and suggestions, respecting the management of barnyard fowls, from practical men who know how to raise eggs and chickens profitably, and who are doing it this very day, and I doubt not that your numerous readers will value them more than all the fine stories or fine pictures that Burnham, or any other hen fancier, have ever published.

Yours truly, R.

GLANDERS IN HORSES.

Glanders is the *worst* and most *loathsome* form of disease to which the horse is subject; and man himself does not enjoy immunity from it. In the mother country, in France, and in the German confederacies, glanders has appeared in isolated cases among men, and even whole families have been swept away, as by the blast of a tornado, dying the most horrid deaths. A man or horse once inoculated with the true virus of glanders, is doomed to destruction; there appears to be no help for him.

The exciting causes of *spontaneous* glanders, are excessive work, faulty nutrition and bad stable management, both as regards diet and ventilation.

SECOND MODE OF ORIGIN.—The next cause assigned for the presence of glanders, is *contagion*. I use the term in its ordinary acceptation, which signifies *contact* or *touch*; the glandered virus being applied or received on an abraded or highly vascular surface, is taken up by the absorbent vessels, enters the circulation, and after a while, appears as "*inoculated glanders.*"

The third cause of glanders is *infection*. The term infection signifies, to corrupt or vitiate. The atmosphere which pervades a down-cellar, or unventilated stable locations, is infected or tainted with the odoriferous gases arising from filth and animal excretions. Here the virus of glanders can be concocted and the disease reign triumphant. The vitiated atmosphere prevailing in such locations, finds an easy introduction into the horse's system, through pulmonary respiration. And no doubt many other diseases, hitherto considered as contagious, have had the same pulmonic origin. Therefore, the exciting cause of infectious glanders is the poison or miasm generated in a confined atmosphere, concocted out of exhalations from the breath, fæces, urine and perspiration of horses pent up in it. It will be perceived from what I have already said, that spontaneous glanders is the result of an infected atmosphere, so that in reality there may be but two exciting or direct causes for glanders, viz: *contagion* and *infection.*

TREATMENT OF GLANDERS.—The only remedies that are likely to prove beneficial in the treatment of this malady, are, cod liver oil, phosphate of lime, vegetable tonics, and blood root; these may be given in the ordinary doses, as recommended for other diseases; at the same time I should give thirty drops per day, of oil of sassafras, and occasionally inject the nasal cavities with diluted pyroligneous acid.—*Dadd's Veterinary Journal.*

For the New England Farmer.

TARRING CORN FOR SEED.

MR. BROWN:—I admire the outspoken, straight forward course of yourself and others that write for the *Farmer.* The opposite opinions of farmers brought together, are conducive of much good. The results of experiments, both successful and otherwise, are attended with profit, when spread before the public. The man who is successful, publishes it abroad, but failures seldom come to light. The ——— county society does not publish the fact of a heavy debt occasioned by their race course, no more than they do the granting of premiums to unworthy applicants. When we read in their transactions the award of a premium for *one hundred and twenty-one bushels of corn to the acre,* eighty bushels is no doubt nearer the truth.

It pains me to see such havoc made by insects and birds on the corn crop. I have seen many a field of corn where the cut worm has destroyed from 25 to 50 per cent., which might have been prevented by an outlay of 25 cents. The only sure remedy against the cut worm is to secure the services of the crow in the fields.

Forty-three years actual experience has demonstrated to me the entire safety of such birds being permitted to range the fields at will.

Tar applied to seed corn before it is planted, certainly will prevent the crows destroying it. For more than forty years I have not been able to detect a single failure, wherever it was done correctly. Not one person in ten would probably be successful in their first endeavor in tarring corn; to be known, the operation must be seen. One man dare no use boiling water, so he fails; another destroys the vitality of the kernel by too great a degree of heat long continued. I have known parts of fields destroyed by poisonous manures, when this single fact was overlooked, and tar, or the birds, was erroneously supposed to be the cause.

Could some President of an Agricultural Society, or some pattern farmer, be induced to try the experiment of tarring seed corn, I doubt not that in less than ten years, scarecrows would be among the missing. Some farming editors recommend the planting of 8 or 10 kernels to the hill, as a safeguard against worms and insects. The expense to thin out is great, and a field thus dealt with never stands equally in all the hills. By tarring your corn, you need plant no more kernels than you wish to grow. When we destroy the crow, we lose one of our best friends; when will the farming community pause and consider on this matter? Let us have your opinions, based, as far as may be, on facts; especially let us have failures, so as to bring together both sides of the question. R. MANSFIELD.

West Needham, April, 1859.

REMARKS.—Friend Mansfield has not given us the mode of tarring, which might be adopted if persons understood the precise mode of preparation. Our neighbors practice in this way: they fill a pail half full of boiling water, add about half a pint of common tar—coal tar is just as good—stir it until the tar is melted and thoroughly mingled with the water, then add the corn, stirring it well for about ten minutes, or until it is completely coverd with the tar. Take the corn out and roll it in plaster or fine ashes, and the process is complete.

ROBINS AND WORMS.

While so much is said and written in reference to the destructiveness of the robin, an Albany cultivator thus writes his opinion:—"The robins are so industrious to feed their young with the cut-worm, bugs and insects, so destructive to the garden, that I consider every robin's nest in or near my garden to be worth a dollar." Still another:—A Vermont farmer says, "If we would consult our real interest, as well as the finer feelings of our nature, it would be by defending the innocent robin from the attacks of both boys and men." And in reference to the "larger species" of grubs or muck-worm, he continues, "Providence seems to have provided an antidote to this evil, in the common robin. This innocent and useful bird preys with peculiar avidity upon this species of worms. This fact may be ascertained by visiting a nest of young robins in the vicinity of a corn-field, when it will be perceived that they are fed lavishly upon this kind of worm."

TAR AS A DISINFECTANT.—The editor of the *Medina Gazette* tells of a skunk being captured in a house by a dog, with the usual result of disgust to the victors. The terrible scent was neutralized by burning tar upon live coals of fire by which the air was purified as if by magic. If this kind of fumigation is a sure specific, it deserves to be known and put upon record.

EXTRACTS AND REPLIES.

GROWING OF ONIONS.

My neighbors are anxious to know something more about Mr. Emerson's discovery, "whereby he secured a good crop of onions." They do not believe that a plant, once impregnated or attacked by the maggot, can be saved by the application of guano, in any form or any quantity. They believe, where there are plants enough on the ground, some of them may be perforated by the worms, while others are not—and that those plants which are not thus attacked, may be improved in their growth by the application of guano—this is their theory and interpretation of Mr. E.'s discovery. Some of these cultivators have been engaged in the business of growing onions for thirty years or more—and during all this period, have raised from one to four thousand bushels each, a year. If Mr. E., or any other gentleman of N. H., has had a more enlarged or critical experience in this class of culture, I should like to know it. The truth is, they know every rope in the ship about the onion. To grow and preserve them has become a second nature. I would as soon undertake to teach a Marblehead fisherman how to hook a cod, or a Kentucky hunter how to use a rifle, as to teach a Danvers gardener how to grow onions. SOUTH DANVERS.

April 9, 1859.

DRAINING A MEADOW.

I have a meadow in which the mud is about one and a half feet deep resting upon a thin stratum of clay, and under this is quicksand. Will an underground drain, laid with stone, be safe, or will it be likely to soon fill? The quantity of water discharged is considerable. How will it answer to plow in summer, put on a little sand or manure, and seed down? S.

S. H., March, 1859.

REMARKS.—An underground drain made of stone will be quite likely to get filled up and become useless in the course of a few years. But properly drained, with tile or pipe, it will be among the best lands.

Summer plowing and seeding is a capital operation—but even that ought to succeed thorough draining.

LAYING LAND TO GRASS—GRAPE VINE.

I have a piece of land rather low and somewhat clayey, which I wish to lay down to grass this year, and want to know the best time and way. Corn has been raised on the same piece for two years, a thing that I do not often do. Barley does not do very well here, and there are objections to oats when sown with grass seed. How would it do to put on guano and oats, this spring, and after the oats are off, put on manure and sow grass seed? If this course would do, how much guano should be used, and how and when should the manure be applied and the grass seed sown?

I have a native white grape vine which has borne for several years, and ripened its fruit finely; but last year, after the fruit was fully grown it began to wither, and very few if any of the grapes were fit for use. If you can tell the cause,

and how to prevent the same again, I should be thankful. N. G.

Taunton, Mass., 1859.

REMARKS.—Sow the land with spring wheat and grass seed; or sow only *one bushel and a half* of oats to the acre, and your grass seed will probably take well and grow well. Can give no advice about the grape vine.

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SOWING SEEDS FOR BUCKTHORN HEDGE.

Will you, or some of the readers of your valuable paper, inform me which is the best season of the year for sowing the seed for a buckthorn hedge? Also, the best manner of sowing?

Pittsfield, Mass., 1859. EMORY H. NASH.

REMARKS.—We have not had occasion to sow the seed of buckthorn, nor can we find any account of the process in the books. It is seldom done except by nurserymen, because a hedge is so much more readily obtained from the plants. We should sow the seeds in a fine, mellow, garden soil in May, as most other seeds are sown.

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SETTING FRUIT TREES—CLOTH FOR HAY-CAPS.

I wish to be informed as to the best mode of preparing the ground for setting fruit trees. Also, is it best to set them in the spring or fall? Also, will cotton cloth used for hay caps, shed rain without any preparation of oil or paint of any kind? A NEW SUBSCRIBER.

Hatfield, April 7, 1859.

REMARKS.—The soil, to be in the most favorable condition for fruit trees, ought to be underdrained; then plow, pulverize and manure as you would to obtain sixty bushels of corn per acre. Dig the holes five or six feet across, and twelve to eighteen inches deep; do this several days before you set the trees. Holes prepared in this liberal manner, will give you room enough to place the roots in their natural position, and will be actually cheaper in the end, than to dig them three feet in diameter. Every good tree, taken up and reset, carefully, will live and grow, whether set in fall or spring. We set them at either of these seasons, as is most convenient. Good twilled cotton cloth, costing about nine cents a yard, will shed the rain from a well made up haycock during a storm of three days and nights. They are better without paint or varnish, or any other preparation.

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WARTS ON PLUM TREES.

In answer to an inquiry of "A. R. S." about plum trees, I would say that several years' experience has taught me, that a sure way of preventing warts or hard protuberances from growing on plum trees, is to place chicken coops under them as early in the spring as possible, or before the trees blossom. The chickens will look out for everything that causes warts. I. F.

Pittsfield, Mass., April 6, 1859.

RAISING CALVES.

I never let the calves suck more than twice, without the cow's bag is swollen very much. They will learn to drink milk as soon as they get a little hungry. After they have learned to drink well, give them some meal or fine hay, and they will soon eat like cows. I keep fourteen head of cattle, and I raised them all (except one) in this way. One of my heifers, which calved a year ago, in October, when turned out to grass in June, gave fourteen quarts of milk a day quite a number of days. Another, which I sold two years since to a man in this town, has given over nineteen quarts per day. She is owned by a man in this town now, who would not take $100 for her. A YANKEE FARMER.

Westboro', April, 1859.

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WELL AND AQUEDUCT WATER.

I have a well which, in a dry season, affords water much cooler and better for some purposes than that from the aqueduct. In a wet time it fills up so full that it is but little cooler than that of the aqueduct. The well is eight rods from the house, twenty feet deep, with descending ground to the house.

I wish to inquire if by inserting a pipe to the bottom of the well, I can with a pump take water into the buildings of uniform coldness, or will it meet with the same variations it does when taken with the "old-fashioned bucket?"

Waitsfield, Vt. S. P. JOSLIN.

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ROBINS.

An anonymous correspondent of the *Farmer*, in a short note referring to robins, says, "I have just met in Vol. X. of the *Farmer*, p. 306, a well written article on this subject, which I refer to with the greatest pleasure, as it controverts the notions of N. Page, Jr., put forth with adroitness in the lately-published transactions of the Essex Society."

If friend "Star" will explain clearly which statement of mine, or assertion, or "notion," if he pleases, is successfully controverted by anything in the article alluded to, I will readily, as in duty bound, retract. N. PAGE, Jr.

Danversport, April, 1859.

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CHANGING SEED POTATOES.

A neighbor, who has the very desirable habit of pocketing several hundred dollars annually from the proceeds of his potato crop, says he increases the yield from fifty to one hundred per cent. by procuring seed potatoes, which grew on an entirely different soil fifteen or twenty miles distant. Fifty per cent. on the potato crop of the whole State, I imagine, would be more in a single year than our proportion of the Massachusetts claim, about which so much ink and breath have been spent in the last forty years.

Lancaster, Mass., 1859. H. LINCOLN.

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THE SEASON—CANKER WORM.

The month of March gave eight inches of rain, and the first half of April promises near as much in proportion. What it falls short in rain is made up of cold winds, indicating large banks of snow to the North. On all sides the winter is

spoken of as having been mild and open. Cultivators are anticipating a favorable spring. I perceive those who have apple orchards are preparing to guard by tar, against the ascent of the grub, that deposits the egg from which springs the canker worm—that bane of all good orchards. Were it not for this devourer, the acres appropriated to orchards would be the most valuable on the farm. ESSEX.

April 12, 1859.

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SOIL-PLANTING IN HOTBEDS.

In a recent number of the *Farmer* I noticed soil-planting in hot-beds recommended. My advice to those inclined to try the experiment, is to be moderate in their expectations of success. I made the experiment some two years since—and like most of my plants—got bit for my pains.

The grub which I transplanted into my bed with the soil nearly destroyed my planting. Those which escaped the grub, found it an impracticable affair to attempt to root through a compact soil, consequently they yielded up the design with all the gravity of a nonplussed tendril. And my first planting of that year was duly chronicled a failure. H. M. COUCH.

Georgetown, March, 1859.

For the New England Farmer.

HOW PLANTS GROW—LESSONS IN BOTANY.

MY DEAR SIR:—I have for many years, ever since I was old enough to know what the benefits might be, been in favor of the farmer's studying the natural sciences. As long ago as 1840, I wrote a series of articles on this subject, which were published in the old *New England Farmer*, edited by Henry Colman. Each year since then, I have been more and more impressed with the truth of what I said, and the number of those of the same opinion has nobly increased since that time, insomuch, that many efforts have been made, and some of them, I am happy to say, with signs of success, to establish institutions in which these branches shall be taught, with special reference to the needs of young farmers. Success, I say, to every effort in the cause. Let such schools be multiplied all over the land.

But it is easy to see, that however numerous these may become, their number will always be too small to meet the universal demands of the young farmers of America. We must have a starting point short of them, and that point must be the home of the young, and the "peoples' colleges," the district schools; for as numerous as higher institutions may become, the great mass of American youth are, probably, through all time, to receive their school education in these humbler institutions.

I am aware there have always been obstacles in the way of introducing these studies in our schools. Not in the children, be it understood; they are born naturalists, and only need to have this principle of nature drawn out, to become eminently so. But parents, blinded by other objects, have looked with unholy indifference on the useful and beautiful in the world around them, and have diverted the minds of their children to other, less attractive studies. Then, we have had no text books adapted to the capacities of the young. They must be so clogged with scientific technicals that the clear sunshine of beauty they should bring, was provokingly befogged with perplexity and darkness. Then we have had but few teachers qualified to the task, or rather pleasure, of giving instruction in these branches. They have been educated to other and often less useful and less attractive sciences.

We rejoice in one series of scientific text books, adapted to the wants and capacities of the members of our common schools, and shall hail its introduction as the dawn of a new and brilliant era in their existence. Prof. Gray, in preparing his botanical works, has fully comprehended the wants of the young. His "How Plants Grow," commences the work of vegetable physiology and botany in the germ, and leads the pupil on, just as young plants grow; naturally and familiarly, in a style that any child can comprehend as easily as they can any ordinary reading lessons.

This work is followed by his "Lessons in Botany," written in the same familiar style, but leading the student up another grade in this beautiful and attractive science. And then comes his "Structural and Systematic Botany," whose course is still upward and onward, until led into the "Manual of Botany," decidedly the most full and understandable work on the science we have ever seen.

In addition to the familiar language in which the works are written, they are illustrated, thanks to their enterprising publishers, Messrs. Ivison & Phinney, New York, by cuts so life-like that any one at all familiar with flowers will recognize them without any other introduction. The series is one by which any ordinary mind may become its own teacher; a ladder that is of so easy ascent that the youngest may safely venture upon it.

The only remaining obstacle in the way of introducing the study of plants into all our schools, now, that we can conceive of, will arise in the plea that our teachers are not educated in the science; but this series happily removes this obstacle, for we wouldn't give a fig for a teacher who has not mind enough to become familiar with "How Plants Grow," and energy enough to cultivate it. One hour's reading and investigation each day, will keep a teacher enough in advance of her class, and enable her attractively to lead them along. The pleasure and profit all will derive from the effort who will make it, will more than compensate for the labor bestowed. She will find another gem in their educational garlands, and new and attractive objects of beauty in a world where ignorance and indifference see so much deformity.

The season for our common schools to open is near, bringing with it the early spring flowers; fit season to commence their study; and we hope the teachers of our good, old Commonwealth will see to it that a class of beginners is formed in every school. Further than this, let every school become a class in learning "How Plants Grow," just as many of them are now singing classes. To this end, let the teacher talk to them a few moments every day upon the subject, giving illustrations of the subject. For instance, let a common garden bean be the subject, and let them show them the bean dry and dead, then when the first

vegetation process developes itself, and so on until it reaches maturity. Or let them take a bud, and show them how the leaves that are to shade them this year, were folded up and hermetically sealed last fall, to preserve them through the long, cold winter, and how they break their encasement and expand in early spring. A few short talks and illustrations will get up an interest that will grow and increase like the growth and increase of the plants they delineate, until a beautiful tree of knowledge, bearing flowers, leaves and fruit, will appear to gladden its possessor. W. BACON.

Richmond, Mass., April 9, 1859.

REMARKS.—The publishers of these excellent works do not seem to appreciate what would be greatly for their interest, by neglecting to secure a notice of them through proper channels.

THE NEW BREAD AND MILK LAWS.

It is known to most of our readers that our Legislature has attempted to secure to the people of the Commonwealth pure milk, good measure, and bread of full weight. The acts relating to these subjects are of such general interest, that we copy them in full. The following is the act to punish fraud by the sale of adulterated milk, and to provide for sealing measures to be used in the sale of milk:

Section 1. The Mayor and Aldermen of the several cities in this Commonwealth shall, and the Selectmen of the several towns may, annually appoint one or more Inspectors of Milk, whose duty it shall be to prosecute all violations of the law against the adulteration of milk, and who shall have power to enter all places where milk is stored or kept for sale, and whenever he has reason to believe the same in any way adulterated, he shall take specimens of the same and cause them to be analyzed or otherwise satisfactorily tested, the result of which he shall preserve as evidence against the parties complained of.

Sec. 2. Said inspectors shall keep an office and books, for the purpose of recording the names and places of business of all persons engaged in the sale of milk within their respective limits; and any person who shall presume to engage in the business of selling milk without first causing his name and place of business to be recorded upon the books of the inspector of milk, and his name legibly placed upon all carriages used by him in the conveyance of milk, shall be subject to the same penalties as if convicted of the adulteration of milk, as provided in the two hundred and twenty-second chapter of the acts of the year eighteen hundred and fifty-six.

Sec. 3. Inspectors appointed pursuant to the provisions of section first of this act, shall, before entering upon the duties of their office, be sworn to the faithful enforcement of the provisions of this act, and shall also give public notice of their appointment, by publishing the same two weeks in some newspaper published in the city or town in which they hold their place of business, and if no newspaper is published in such town, by posting in public and conspicuous places in said town, two or more such notices; and they shall receive such compensation for their services, as the Mayor and Aldermen of the several cities, and the Selectmen of the several towns, shall determine.

Sec. 4. Milk shall be bought and sold by wine measure. All persons engaged in the sale of milk shall annually, in the month of May, cause to be sealed by the sealer of weights and measures in their respective cities and towns, all vessels used by them in the sale or buying at wholesale of milk, by wine measure, and all cans used in the sale of milk shall be sealed by said sealer of weights and measures at a price not exceeding two cents each at the amount which they severally hold by wine measure, and any person who shall fail to comply with the provisions of the law requiring all measures to be sealed, or shall buy or sell at wholesale, milk by any other measure than wine measure, or shall sell adulterated or unwholesome milk, shall be held guilty of a misdemeanor, and upon conviction thereof by a court of competent jurisdiction, shall forfeit to the use of the complainant a sum not exceeding twenty dollars.

Sec. 5. No person shall offer for sale in this Commonwealth, milk produced from cows fed upon the refuse of breweries or distilleries, or any other substance which may be deleterious to the quality of the milk, under a penalty of ten dollars for each offence.

Approved April 6, 1859.

The following is the act passed by the Legislature, regulating the manufacture and sale of bread:

Section 1. A loaf of bread shall be two pounds in weight; and bread may be baked and sold in loaves, half, three-quarter and quarter loaves, but not otherwise, except in bread composed in chief part of rye, or maize.

Sec. 2. Small rolls and fancy bread weighing less than one-quarter of a pound each, may be baked and sold without regard to weight.

Sec. 3. In every shop or place where bread is sold by retail, and in each front window thereof, there shall be conspicuously placed, a card, on which shall be legibly printed a list of the different kinds and qualities of loaves sold there, with the price of each per loaf, and half, three-quarter and quarter loaf.

Sec. 4. All bread, except small rolls and fancy bread of less than a quarter of a pound each, sold in any shop or place, shall be weighed in the presence of the buyer, and if found deficient in weight, bread shall be added to make up the weight required by law.

Sec. 5. Any person who shall violate any of the provisions of this act, shall forfeit for each offence, the sum of ten dollars, to be recovered in an actio of tort to the use of the party suing therefor.

Approved April 5, 1859.

JACOB STRAWN, THE GIANT FARMER OF THE WEST.

Twenty-seven years ago, Mr. Strawn came to this State a poor man. His operations were small at first, but continued to increase each year, until he had reduced over 30,000 acres of land to a state of cultivation. He has one farm of 7,800 acres, and another of 10,000. He has usually employed from 200 to 300 men, and a large number of horses. Every year until quite recently, he has stalled from 5,000 to 6,000 head of cattle, and kept other live stock in proportionate numbers. In this twenty-seven years he has made a fortune of a million of dollars, and he is still hale and vigorous to enjoy it. He has one corn field in Morgan county, nearly six miles long, but has

latterly been curtailing his business and converting some of his real estate into cash. He is a monument of what patience, perseverance, industry and continuous exertion in one direction will do for a man who has determined upon the accomplishment of a certain end.—*Journal, Springfield, Ill.*

For the New England Farmer.

LABOR OF BEES IN HIVES.

In the *Farmer* of January 1st, "Progress" says, "I have a suggestion to make respecting bee-hives on Mr. Quinby's plan. I like the leading idea of his plan, but not the application of it. In his hives the bees are obliged to store all their surplus honey in boxes placed on the top of the hive, and they must climb up to get to the boxes. Instead of placing boxes on the top, why not have a small hive, or large box, to set by the side of the hive, and when it is full, open a communication between the two, and allow the bees to store their surplus honey in it just as Mr. Quinby has his stored in boxes on the top?"

"Progress" is not the first man that has suggested this idea. To those who can look only at the surface of things, it does really appear as if the bees had needless trouble to reach the boxes on the top. There are many things about bees that work much better in theory than in practice, and I suspect that we *know* but very little about their manner of operations, and are often in error in our endeavors to assist them. I would, however, suggest to "Progress," that it is possible, yes, more than possible, that the bees which gather the honey, are not the ones that store much in the boxes. This seems to be indicated by what we can see when watching them in a glass hive. For instance, one bee can frequently be seen giving another honey. Also, one that brings pollen, finds a cell suitable to receive it, and then thrusts in its legs, and discharges its load, consisting of the round pellets, and leaves without further care. Another bee, probably a nurse, soon comes along and packs it close in the bottom. A great many gatherers bring in both honey and pollen. The latter is seldom stored in the boxes on the top, but kept in the hive where the brood is raised. Consequently, hive honey is not as pure as that from box or cap. If a bee went to the boxes to discharge a part of its load, why not all?

A glass hive that was apparently full throughout with brood and honey, had boxes put on the top to receive the surplus. Before they had constructed much comb in them, the bees would deposit honey on the surface of a comb, containing a brood of drones, in the hive! The convex covering of these cells made cavities between, sufficient to keep it in place—the next morning, it would be all removed, probably to the boxes, as the bees were constructing combs there. It is quite common to see honey in the cells next the glass at evening, and next morning, find them empty.

For several years, I have had what might be termed a perfect observatory hive in operation. It was nearly five feet high, two and a half feet wide, and one and three-fourths inches thick; containing just one comb in thickness, and had boxes on the top of it. Whenever the yield of honey was good, nearly every unsealed cell not occupied with brood or pollen, would contain honey at evening; but the honey would generally be removed during the night. The honey sealed up, was either in the top of this long hive, or in the boxes, as far as possible from the entrance.

From the foregoing, I shall *suppose* till we get further light, that the bees which go about after the honey, have but very little to do at home in packing and sealing up stores for winter; that when a loaded bee enters the hive, it either gives its honey to another, or discharges it into the first convenient cell at hand, and afterwards it is removed to the boxes or some other part of the hive away from the entrance. The result of some thirty years' experience fully sustains the above theory. I have had hives twenty-two inches in height, and others only ten; on account of this difference in shape, I could discover no difference in the result in the boxes. Hence our laudable attempts to assist our bees by placing boxes near the entrance, to save the labor of travel, is not attended with the expected success.

Respecting "the box at the side" suggested by "Progress," I would say that a little experience will indicate the best place to obtain surplus honey. For myself, I have always found that the bees must be crowded for room in every other place, before they will store much at the side. It would appear as if they thought it less safe from robbers than at the top. It is quite common to have boxes on the top filled and ready to be removed, in from fourteen to twenty days, and I never had any at the side, ready to take away, short of five or six weeks. In fact, I never had any so well filled here, as at the top. For the last few years, I do not take the trouble to give the bees a *side* box, as long as all of them can be profitably employed elsewhere.

St. Johnsville, N. Y. M. QUINBY.

For the New England Farmer.

DAIRY SALT.

I do not recollect seeing published the following method of preparing dairy salt. Perhaps it is too well known to merit it. It was introduced to me as being practiced by an experienced Scotch dairyman.

Take the best crystal salt, wash it, dissolve, strain, settle and turn off; boil it down in some perfectly clean iron vessel, skim as boiling; when stirred off dry, it will produce fine salt, white as the drifting snow, which if stirred up in a glass vessel of water, will produce no sediment, and will be distinct from any mineral or other possible impurity.

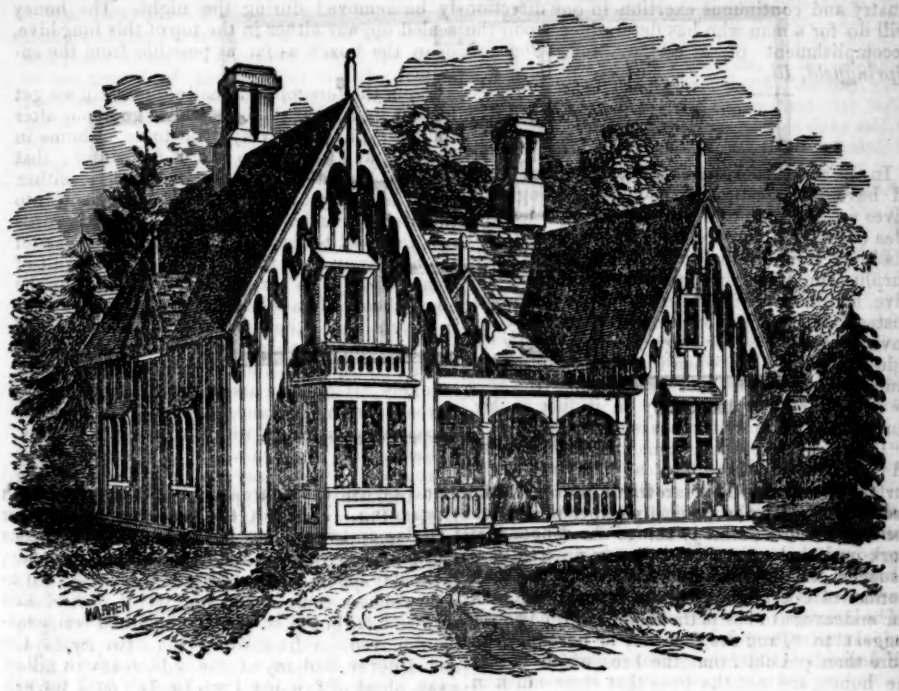
Salt is offered in the country markets for from one and one-fourth to one and one-half cents per pound, which looks like the model of perfectness. After the above method of manufacture it will cost nearly double that amount.

For two years past we have manufactured salt in this way for the produce of about three tons of butter each year.

Having this year increased our dairy, we have procured coarse salt for another trial of the same.

S. P. JOSLYN.

Waitsfield, Vt., March 17, 1859.

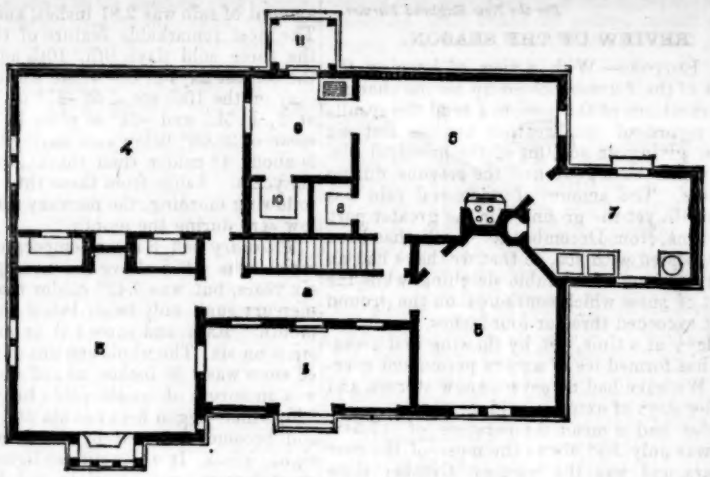


DESIGN FOR A COUNTRY RESIDENCE.

We are happy to present the reader to-day, with what appears to us a beautiful design for a country residence. It is from the pencil of Mr. G. E. HARNEY, a young artist of great promise, of Lynn, in this State. We have rarely seen sketches so truthful and life-like,—truthful, because they are life-like,—and so animated, if we may be allowed the license, as several we have been permitted to look at from his pencil. We have employed the best engraver to second his efforts, and believe the result will prove acceptable to every person of taste. We will indulge in a single remark, only, in connection with this subject, and that is this: You may expend a given sum of money in building your house, and produce an awkward, uncouth and inconvenient dwelling, or, *with the same cost*, have one that shall be attractive, tasteful, and every way convenient. If you are not acquainted with the subject—as it is hardly expected many will be—you have only to apply to some competent designer and architect for the proper suggestions. The latter course is always cheapest in the end.

For a situation away from the city, where the owner is not restricted to a four rod lot, but whose estate is measured by the acre, we think the accompanying a very appropriate design. We offer a dwelling, the leading features of which are of the rural gothic style, characterized by the verge-boards, pointed arches of the veranda and porch, lattice-windows and the general prevalence of modified gothic features.

The following is the description of the plan: No. 1, veranda; No. 2, hall, containing stairs to the chambers, with a private, enclosed staircase under these, leading to the cellar. Opening from the hall, No. 3, is the parlor, 15 feet by 16, in the front of which is a bay-window, which may be furnished with a cushioned seat. No. 4, living-room, 14 feet by 21, containing a large closet on each side of the chimney-breast, and communicating by means of the pantry, No. 9, with the kitchen, No. 6. The pantry is to be furnished with shelves and sink, contains a store-room, No. 10, and opens upon a small stoop, No. 11, which shields the rear entrance to the house. The kitchen is 14 feet by 18. No. 7, is a one-story addition, 9 feet by 15, containing a wash-room, fitted with a boiler and stationary tubs. A door opens from this room to the yard. No. 5 may be used either as a bedroom or library; it is 13 feet by 15. The second story contains four good sized chambers, besides dressing-rooms, closets, a bathroom, &c. Height of first story, 10 feet; do. of second, 8½ feet.



GROUND PLAN OF THE DESIGN.

Construction.—This is a frame house. The outside covering to be vertical weather-boarding, of uniform width; the joints to be tongued and grooved and covered with battens. The verge-boards, window and door-trimmings, and other ornamental details, to be sawn from 3½ inch plank. The interior is to be plain finished in the two principal stories, and the attic may be left unfinished, if desired. Cost from $2800 to $3000.

G. E. H.

For the New England Farmer.

TARRING SEED CORN.

MR. BROWN:—Mr. R. MANSFIELD, in the *Farmer* for April 23d, says "that after an experience of forty-three years he is satisfied that crows and birds may be permitted to range the fields at will, and that tarring seed corn, if it is done correctly, will prevent the destruction of corn by crows so that no 'scare-crows' need be used in the fields at all."

After twenty years' experience, I can bear testmony also, that Mr. Mansfield, on this point, is substantially correct; and also, that the "tarring of the seed corn" is a pretty safe remedy against the ravages of the cut worm, grub and wire worm.

Probably, of all the farmers that have tried "tarring seed" in the past fifteen years, not one-third now continue the practice. One farmer tried the tar and he got on so much that the corn would not come up. Another farmer poured stiff tar among his seed corn, and tried to stir it up; some of it was tarred, but a good deal more was not, and the crows pulled it just as fast as they could get to it. A third farmer said that the tar stuck so to his hand that he could not plant it, &c. Mr. Mansfield has not given us his plan of preparing seed corn in this way for planting. But you have given yours, and your neighbor's plan, which seems to me a very good way.

During the past twelve years I have given a plan of preparing seed corn for planting in several agricultural journals. But it may be worth repeating. First put the seed corn to soak for twelve or twenty-four hours, in water, previous to planting. If you have some saltpetre handy, dissolve half a pound in warm water and turn to the corn in soak. Then take out a peck of this swelled corn, put it into an old half bushel measure or small tub; raise up the corn round the measure in form of a tunnel; then take a gill of tar, (pitch tar is the best, though coal tar will answer,) put it into a half-new tin pan, pour on water enough to cover the tar and then set the pan over a furnace. When it boils, stir the tar and water until it has become entirely dissolved in the water. Then pour it on hot to the corn, and stir it well until all the corn has become well smeared with tar. When you stop stirring, the corn will crawl together like a pail of small live crabs. Then take your plaster and scatter it on, stirring it till every kernel is coated with plaster, and the corn is ready for planting.

Of course, it is understood by farmers that the seed corn after this preparation must be kept moist in the field. If the seed is allowed to get dry and parched for any length of time in the sun, it will not germinate, and must not be planted. When seed corn is treated after this plan no farmer need fear but that his corn will come up in good time, if the seed is good.

Derby, Ct., 1859. L. DURAND.

HYDROPHOBIA.—A man was cured of hydrophobia in Italy lately, by swallowing vinegar, in mistake for a medicinal potion. A physician at Padua heard of this, and tried the remedy on a patient; he gave him a pint of vinegar in the morning, another at noon, and a third at sunset, which cured him.

TO TAKE RUST OUT OF STEEL.—Cover the steel with sweet-oil, well rubbed on. In forty-eight hours, rub with finely powdered, unslaked lime, until the rust disappears.

For the New England Farmer.

REVIEW OF THE SEASON.

MR. EDITOR:—With a view of keeping the readers of the *Farmer* posted up on the changes and fluctuations of the season, I send the results of my record of the weather for the last six months, giving an account of the principal elements which have governed the seasons during that time. The amount of snow and rain has been small, yet the ground for the greater part of the time, from December to March, has been mostly coated with ice, so that we have had an ordinary amount of tolerable sleighing, while the amount of snow which continued on the ground has not exceeded three or four inches, more than a few days at a time, yet by thawing and freezing, it has formed ice of a more permanent character. We have had no severe snow storms, and but a few days of extreme cold weather.

October had a mean temperature of 47.54°, which was only .68° above the mean of the past six years, and was the warmest October since 1854. Rain fell on 15 days, and its whole amount was 3.58 inches, but no snow fell during the month. We had two thunder storms, one on the 23d, with heavy thunder in north-west, from three to six, P. M.; had a light shower at six o'clock. On the 30th at eight o'clock, P. M., thunder was heard in north-west, and in a few minutes rain began to fall, and soon increased to a heavy shower, when the thunder was not heard for some time, but at 40 minutes past eight o'clock, there was a sudden heavy peal of crackling thunder, which probably struck at no great distance. After this, rolling thunder continued in south-east, till about 20 minutes past nine. There was an aurora of considerable brightness between eight and nine o'clock on the evening of the 27th, consisting of bright arch, rays, streamers, and beautiful corruscations.

November had a temperature of 30.37°, which was 5.62° colder than the mean, and colder than any of the six preceding years. Rain and snow fell on 13 days. The total amount of rain and melted snow was 2.64 inches. Amount of snow 8½ inches. Winter commenced with a snow storm on the 23d and 24th, when the depth of snow was 5½ inches. The total amount of snow for the month was 8½ inches. The mountains were covered with snow on the fourth, and on the seventh the first snow fell on the low lands. On the 22d, there was a cold fog, or in other words, a storm cloud rested on the earth, and as the cold increased in consequence of the north-west wind, frost gathered in beautiful crystals ,on the north-west side of twigs of trees and other objects, showing the beautiful process of the formation of the snow-flake.

December had a temperature of 21.02°, which is 1.37° below the mean. There were two evenings and two mornings when the mercury stood below zero; the lowest was 11° below, on the morning of the 25th. Rain and snow fell on 13 days, and snow on five days. The whole amount of rain and melted snow was 2.38 inches, and the amount of snow 7½. There was a large amount of frozen rain, and rain and snow together.

January, 1859, had a temperature of 21.03°, being 4.51° above the mean. Rain and snow fell on thirteen days, and snow on seven. The whole amount of rain was 2.81 inches, and of snow 14¼. The most remarkable feature of the month was the three cold days, 9th, 10th and 11th, being the coldest days of the whole winter. The mercury on the 10th stood at -27° at 7, A. M., -20° at 2, P. M., and -24° at nine, P. M., making a mean of 23.66° below zero during the day, which is about 4° colder than the coldest day within six years. Aside from these three days and the following morning, the mercury did not sink below zero during the month.

February had a mean temperature of 23.64°, which was 4.63° above the average of the past six years, but was 3.42° colder than 1857. The mercury sunk only twice below zero during the month. Rain and snow fell on eight days, and snow on six. The whole amount of rain and melted snow was 1.39 inches, and of snow 14⅛. There was an aurora of considerable brightness on the 22d, which began between six and seven, P. M., and became obscured by clouds a little before eight o'clock. It was a diffuse light without rays or streamers, with a bright red border in the north-west.

March has been the mildest month of the same name during the past six years. Its temperature was 34.31°, which was 7.79 warmer than the mean of the six. Rain fell on sixteen days, and snow on three. The amount of rain was 3.95 inches, and of snow 3½. The ice disappeared in Otter Creek on the 15th, and the flood was highest on the 20th. The birds arrived a few days earlier than usual, and uttered their cheerful notes as the harbingers of spring. Although March leaves the earth bare of vegetation, yet the buds are swollen, and the signs of the times indicate an early spring.

The amount of water which has fallen during the past six months is 16.95 inches, and of snow 48.37 inches. The two wettest months were October and March, while the most snow fell in January and February.

Although the prosperity of the farmer does not depend upon the conditions of the past six months to a great extent, yet there are some things worth recording, while to the man of science, all seasons are alike interesting, for he wants to study the laws of elementary disturbance, and gain a knowledge of those eternal principles, which produce change in the earth and in the elements around it. D. BUCKLAND.

Brandon, Vt., April 4, 1859.

For the New England Farmer.

THE WAY TO DESTROY CANADA THISTLES.

In meadows, cut them about the 20th of August, or after they have gone to seed. At that time, the top has drawn from the roots so much for its support, that it leaves the root almost exhausted, and would die were it not for the shelter and protection which the top affords against the fall rains. At this stage of the thistle, you will find that the stalk near its roots, and a part of the roots are hollow, and I infer that the wet getting into it, is what kills it. It is all folly to suppose that plowing, hoeing or mowing, at any season of the year will destroy thistles unless full grown. I have found that cutting the tops of young thistles, with the scythe, or hoe, serves

only to produce more and larger roots with young thistles, which are the first year's growth from the seed. But two years mowing, when in seed, will make a final end of them. If in meadows, cut sweet elders when they are in bearing, and all that have berries on them will die. A. W. B.

West Berkshire, Vt., Feb. 12, 1859.

For the New England Farmer.

THE MAY OR DOR BUG.

(PHYLLOPHAGA QUERCINA.)

This well-known insect is generally disliked on account of its form and color, and because it is accustomed to trouble us in summer evenings by flying into our rooms, and buzzing around in its noisy flight, often tumbling down upon the occupants of said rooms, much to their disgust. But these are nothing to the real reasons we have for destroying these insects, for they are the source of much harm to the farmer; and in order that your readers may recognize their enemies, I send you the following description.

These insects pass through four states before arriving at maturity; namely, the egg, the larva or grub, the pupa or chrysalis, and the imago or beetle. In the egg and pupa state they are without motion, and consequently harmless, but in the larva and beetle state they do considerable harm.

The grubs (which are often confounded with the muck worms which live in manure,) are of a dirty white color; the head is brown and the hind part of their body is dark; they are about an inch long, and one-third or more of an inch thick, when fully grown. They live in the grub or larva state three or four years, and at the end of the third or fourth summer, according to Dr. Harris, they penetrate the earth to the distance of about two feet, where they change into pupa and remain over winter. In May these beetles burst their pupa skin and come forth in their perfect state; they are then about seven-eighths of an inch long, of a mahogany color, with their shells punctured as if slightly pricked with a pin, their antenna are divided at the end into three leaves, and like the legs and under side of the body, are lighter colored than the wing covers; between the hind and middle pairs of legs the body is covered with yellow hair.

As soon as they are hatched they begin to feed upon small roots beneath the soil, and thus they subsist for three or four years, doing an immense amount of damage when very numerous; for instance, sometimes they will undermine meadows so that the turf may be rolled up as if cut with a spade. In the beetle state they feed upon the foliage of trees, often doing considerable damage, but as they live only a short time in this state, they cannot commit such depredations as they do in the larva state.

From the foregoing, I think it will be seen that we ought to free ourselves as much as possible from these troublesome insects; the way in which we can accomplish this best, is by cherishing the birds which feed upon them; and I would say that it would be more profitable for the farmer to protect his corn than to kill the crow, because they destroy an immense number of these and other noxious insects; we can also accomplish a great deal by killing all we meet with in plowing, when they are often turned up, both in the larva and perfect state, and also wherever we meet them.

The best way to kill them is to crush them under foot, or if there are many of them, by throwing them into boiling water, after which they may be given to the hens for food; where they abound they can be collected by shaking the trees on which they feed after spreading a sheet underneath to catch them; this method should be used in the daytime, while the beetles are asleep, for otherwise they will fly off to another tree; but they rarely abound in sufficient numbers for this method, so that the others will answer very well if practiced universally.

CARLETON A. SHURTLEFF.

Brookline, Mass., 1859.

REMARKS.—We have had young cherry, mountain ash, and even elm trees, completely stript by these beetles. They are numerous early in June, and quite destructive. Our mode to destroy them has been to spread a sheet under the trees in the evening, after dark, and jar them on to it, and then gather them up quickly and put them into hot water.

THE SWEET POTATO CROP.

The writer of the following article, which we copy from the *American Farmer*, published at Baltimore, states that 300 bushels per acre may be obtained when the crop is well managed. In our dry, hot summers, we can raise them in New England without difficulty.

Five bushels of small potatoes are required to ensure abundant plantings for an acre. These are bedded as early in the season as the weather will permit, in the following manner. Raise the beds—which should be not over six feet in width—some inches—by throwing surface earth upon it, and mix in good compost of stable manure. Lay down the potatoes upon this bed, side by side, and close enough to touch, and cover them with three or four inches of compost, and several inches of earth upon that. In due time there will be abundant plantings. This method is considered much better than the old plan of planting pieces of the potato.

When the plants are fit to be drawn out, the ground having been well prepared, is laid off in furrows three and a half feet apart. Well made compost of stable manure, yard scrapings, &c., is thrown into the drill, and furrows thrown over it from each side, making a ridge, the top of which is then levelled off with the hoe. The holes in which the plants are to be inserted are made fifteen inches apart; for this purpose a pointed stick is used, near the end of which through an augur hole a piece fifteen inches long is inserted at right angles, which answers the purpose both of regulating the depth of the hole to be made, and of marking by the impression of the cross-piece on the ground the distance of the next hole. A little practice renders a hand expert in thus marking the ground. The plants are dropped according to the marks, and another hand follows to plant them. The young plants are kept

clear of grass by the hoe, and between the rows, as soon as the grass starts, the bar side of the plow is run as near as possible, throwing the earth away from the ridge; in the next working it is thrown back, leaving the ridge about what it was in the beginning. During this working, the vines are laid along the ridges by hand, to avoid their being covered, and returned after the work is done. It is important that grass be kept from about the plants by careful working during the early season of their growth.

When the crop is not consumed upon the ground, it is harvested by chopping the vine off at the surface with the hoe, and running the bar of the plow as near as it may be done without cutting or bruising them, on each side of the potatoes, when they may be easily drawn out.

They are preserved in cellars, or out of doors in kilns. The method of fixing them is to raise the ground a few inches, where they are to be placed, and cover with pine shatters to the depth of six inches or more. The potatoes are laid upon these, and piled in the usual way, as many as fifty or sixty bushels. These are then covered with a thick covering of pine shatters, boards laid upon them, and earth to the depth of six inches, to be increased when cold weather comes on.

EXTRACTS AND REPLIES.

HYDRAULIC RAM.

MR. EDITOR:—I am pleased to see the hydraulic ram so conspicuously presented in your paper of the 16th inst. It strikes me as one of the most useful and convenient appendages, upon a stock farm, that can possibly be introduced—wherever one can be made to operate. I know a farm near me, (known as the Pickman farm,) on which one was placed, a few years since, with a fall of thirteen feet only, and water has been conveyed by it for the supply of a stock of more than 60 head of cattle, for a distance of 2500 feet. The original cost of the ram and pipe did not exceed $200—and the annual charge of repairs has not exceeded $10. If any one can find a better mode of watering cattle, I should like to know it. When it is considered that the water is constantly conveyed to any part of the buildings or yard, where wanted, without any crowding of the animals or loss of manure, I think those who are accustomed to tend upon cattle will perceive the advantages of this mode of watering. *.

HOW TO HULL CORN.

Put one quart of corn into cold water, and add two large tea-spoonfuls of saleratus; put it on the fire, and boil it until the hull will rub off easily; rinse it well in cold water, and put it on the fire again, and boil it until it is soft enough for use. R. W. G.

West Mansfield, 4 *Mo.* 13.

KICKING COWS.

I have noticed something about kicking cows in your paper. Hang a common draft chain over the back of the cow, just forward of the hips, when you go to milk, and I think you will have no more trouble. ISAAC P. GREENLEAF.

Groton, N. H., 1859.

OLD APPLE TREES—GRASS SEED—CRANBERRIES—ASHES.

1. Can large old trees be made to produce more fruit by grafting?

2. Is there any permanent cure for bone spavin?

3. How much grass seed does it require to sow an acre of land?

4. Does not sowing oats or wheat with grass seed exhaust the land and consequently diminish the quantity of hay?

5. When is the best time to set cranberry vines?

6. Will it pay to buy dry ashes at 20 cents a bushel for agricultural purposes?

New Bedford, 4 *Mo.* 4. SUBSCRIBER.

REMARKS.—1. Sound old apple trees producing natural fruit may be grafted profitably.

2. Consult Dr. G. H. Dadd, Boston.

3. If the land is rich, less; if the land is poor, more. One bushel of red-top and eight quarts of herds-grass, with six pounds of clover sowed on the snow in the last of March or in April, is what we use. Some of our neighbors use more, and some less.

4. Wheat and oats, of course, exhaust the soil. To succeed well, sow six or eight pecks of oats per acre instead of twelve, as is usually the case; they will then tend to shade and protect the young grass instead of crowding it out. It is also safe to sow a bushel of wheat per acre when seeding down land, and if the crop proves a heavy one, top dress the land as soon as the wheat crop is taken off, and the grass will be likely to succeed well.

5. A good time to set cranberry plants is in April or early May—whether it is the best time or not, we do not know.

6. Twenty cents a bushel for pure ashes is a good investment for your money.

CATTLE EATING BOARDS AND BONES.

Can you inform me what makes my cattle eat old boards and bones? I cannot have a board fence around my yard, but what some of the cattle will be gnawing it; they seem to have a sort of hankering after something of that sort all the time. Is there not some disease about them that causes it, or are there some properties wanting in their food—which is principally hay cut on old land? Would it be beneficial to give them bone meal—and if so, how much at a time? A VERMONT SUBSCRIBER.

REMARKS.—A little bag of bone meal that will cost about seventy-five cents, fed to your cattle just as much as they will eat, will probably cure their propensity for chewing old bones or eating your board fences. Nourse & Co., 34 Merchants Row, Boston, keep it for sale.

A. A. AUSTIN, Enfield, N. H., is referred to a capital little work, EASTWOOD on the Culture of the Cranberry, for the information he desires.

LICE ON TREES—LAWTON BLACKBERRY—CRANBERRIES ON HIGHLAND.

I have a young orchard, and through neglect it has bred lice so freely, that some of the trees are covered with them. They cover not only the larger limbs, but the smallest twigs. What is the best method of getting rid of them without injury to the trees?

Are you acquainted with the Lawton Blackberry? Is it a good bearer and easily cultivated, and where can it be obtained, and at what price?

Have you ever seen the cranberry cultivated on high dry soil, and if so, with what success?

Greenland, N. H., 1859. E. JOHNSON.

REMARKS.—Take soft soap and soft water of the consistency of thick cream, and scrub the tree with an old brush to get off the scaly aphis—but be careful not to rub carelessly or too hard. Then cultivate well, and keep the trees moderately growing.

The Lawton Blackberry is undoubtedly a fine fruit where the season is long enough to perfect it. It does not ripen well in this region.

Better not cultivate cranberries on high land—it is not their natural place. We have done it, and succeeded, but not at a profit.

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POULTRY.

To Mr. B. G. O., of N. H.—Why do you wish to get the pure Black Spanish fowls or Bolton Greys? They are not as good as some others—at any rate no better. The best hens living are a mixed breed, say a small part China—Dorkings, Polands, Bolton Greys, and the old native breed, all mixed together; then keep a small rooster, if any. I have tried doing without a rooster, and think it rather the best way, if your object is eggs. But on no account keep a large rooster. If you wish to raise chickens for the table or market, get the half-blood yellow-legged China, and the yellow-legged Dorking; have the color mostly white. If you want to have your hens do well and lay well keep a small rooster, or none at all. Keep them in a warm room in the winter, well lighted and ventilated; feed them all they will eat on Indian meal made into pudding, buckwheat, corn and boiled potatoes; some meat and some sulphur. Sulphur I feed to nearly all creatures. If you don't wish to find now and then a large, nice hen dead, don't have your roost more than four feet high, and then have two shelves for them to go up and down on. In this way if they have a plenty of burned bones, pounded crockery, lime, &c., they will pay.

Plainfield, Mass., 1859. GEO. VINING.

—

INDIA RUBBER RINGS.

I saw a notice some time ago, in your valuable paper, that India rubber rings had been invented, and proved successful to prevent cows leaking their milk. Will you please write me where they may be obtained, and at what cost?

ROSWELL UNDERWOOD.

Enfield, April, 1859.

REMARKS.—We are not able to inform you where the rings may be procured.

HOW TO KILL LICE ON YOUNG STOCK.

In answer to the inquiry of your "Milford Subscriber," I would say that pulverized sulphur sprinkled among the hair, on those parts of the animal most liable to be infested with lice, will effect a cure. Also, mix sulphur with salt for your stock to eat. The above method I tried last winter, and it proved to be an excellent, cheap and simple remedy. L. G. BROWN.

Lyndeborough, N. H., 1859.

N. B. Salt and sulphur mixed together and occasionally given to cattle to eat will prevent them from becoming lousy when they are free from lice.

—

LIME ON WHEAT LAND.

When is the best time to sow lime on wheat, and what is the best mode of slaking it?

Huntington, Vt., April 18, 1859. H. M. J.

REMARKS.—Slake the lime with water as is done for making mortar. Sow it after the wheat is sown, and harrow in both at the same time.

—

AN IMPROVEMENT IN RAISING STOCK.

Mr. ELON ROBINSON, of Calais, Vt., has a half blood red Durham bull calf, weighed 1520 lbs. the day he was two years old; girts 6 feet 10 inches; kept on sour skim milk and whey the first summer, and common ordinary keeping since; kept in warm stable in winter, and well ventilated in summer. DURHAM.

Calais, March 27, 1859.

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LONG RED POTATOES.

When I was young, say forty-five or fifty years ago, my father had a kind of potato we called the red potato. They were a longish potato, of a dark red color. It took all the season for them to get ripe. They would nearly all hold on to the tops when pulled. They were a first best potato for spring and summer use. Will some one of the readers of the *Farmer* tell me where I can get the seed?

—

RECEIPT FOR MAKING DOUGHNUTS.

One cup of sugar, one cup of sweet milk, one egg, one tea-spoonful cream of tartar; add half a tea-spoonful of saleratus and two table-spoonfuls of shortening; salt pork fat is the best; stir in flour, and mould it as soft as it will roll on a board; cut it in small cakes and fry them.

R. W. G.

—

A FINE COW.

ELIJAH HERRICK, Esq., of West Milton, Vt., has a cow of native breed who yields him *two pounds and seven ounces* of butter from one day's milk—fed on good hay and three quarts of cob-meal a day. She is eight years old, has had six calves, and has only been dry four months for six years. A FARMER.

—

BARNS.

It is impossible for us to make any useful suggestions to "J. P., North Sutton, N. H.," in relation to his barn, without being on the spot.

For the New England Farmer.

APPLES---WHEAT---PEARS.

MR. EDITOR:—Doubtless you have heard of a small town out here among the hills and mountains, called Lyndeborough. On the eastern boundary of the town we have a romantic spot called Purgatory. Hundreds of people visit the place yearly, and they make the hills and woods resound with shouts both loud and clear. A short distance from this place, can be seen a little old house, a good barn, and as thrifty an orchard as can be found in these parts, according to the care and attention which it has received. This latter place is the rural home of your humble servant. If ever you come into these parts, call, and you shall be welcomed and shown the wonders and curiosities of Purgatory. At some future time, I will, with your permission, furnish you with a written history of this Purgatory of the woods. We have as good farms and farmers as are to be found in any section of the State. The soil is hard and rocky, but when subdued by the laborer's arm, it affords a large profit to the husbandman.

Two facts: Mr. Holt shows by figures, that his profit per acre on wheat is $35,33. He also raised, last season, 30 pears, on a small tree which was seven years from the seed. The 30 pears weighed 25 lbs. The soil and climate are peculiarly adapted to raising corn, wheat and other English grain, vegetables and fruit, especially the apple. Of the apple, over $1000 worth last fall were sent to market from this town. Farmers are waking up and taking hold of the business of fruit culture in earnest. They are renovating their old orchards and setting out a large number of small trees. Many have set out, during the past ten years from 10 to 300 young apple trees. A few cry out, "you will glut the market—apples will not be worth raising—no sale." Such do not stop to consider how small a portion of the world they themselves inhabit, and that they live on a soil that is well adapted to growing fruit which is remarkable for its long keeping qualities, beauty of form and high flavor. A few farmers here are contented to follow in the footsteps of their grandfathers, and year after year, gather natural fruit from their trees and convert it into cider—not realizing, that if their trees were grafted and well taken care of, they would yield them ten-fold more profit than now.

Lyndeborough, N. H., 1859. L. G. BROWN.

For the New England Farmer.

THE SEASON IN IOWA.

This has been the wettest winter and spring ever known in Iowa. A gentleman lately told me that he had seen twenty-two Marches in Iowa, and that there had been more rain during the last, than in all the others together, except March, 1858, which was also wet. It continues to rain and snow in April, thus far, as much as in March. The ground is perfectly saturated. From six inches to three feet of water in almost everybody's cellar. Scarce a blade of grass, or other green thing, ventures to show itself. Last night it cleared off with a very strong and cold wind, and we awoke with frost on our windows. The farmers are, of course, sorely tried. There has been no suitable time to sow their wheat, or prepare the ground, which is generally done in February and March. But there is a glorious promise on record, and time enough yet for its fulfillment.

The accounts of returning prosperity at the East do not help us any, at present; except to encourage the hope that it may reach us, sometime. We do not look for entire relief in one year, with never so good crops. Property is very greatly depreciated; and those who are in debt, are in a sad case.

Many are joining the insane caravan for Pike's Peak. Teams go by here by the dozen, some days. Good will come, no doubt, of this movement, in the future; but at what cost? Suffering and disappointment to nine-tenths of those who go *expecting* to get rich and happy!

Your readers will think that I love to write in a lugubrious strain. *I don't;* but I am bound to tell the *truth.* Perhaps the *whole truth* would require me to add, which I do very cheerfully and thankfully, that this is a rich and glorious country, after all. We have remarkable health; and if we only had a few more of your conveniences, and a few more right, honest, industrious and Christian people, we should be about as well off as this mundane sphere will admit. M. K. C.

Tipton, Iowa, April 14, 1859.

For the New England Farmer.

DOYENNE PEAR.

In a criticism on Col. Wilder's list of pears, the writer, I apprehend, is mistaken in considering the Doyenne Gris and the Boussock to be identical with the St. Michael; the Boussock is an entirely distinct variety; and as for the Doyenne Gris, all I can say is, that this fruit remained fair with me for many years, while the St. Michael, particularly upon the pear root, cracked and blasted. At this time my neighbor Manning commended the Doyenne Gris as the best substitute for the St. Michael. In a recent article which I forwarded for the *Farmer,* I remarked that Rogers is the only writer who has given us scarcely anything as to the importance of soil for the various kinds of pears. I would say, farther, that from the "New England Book of Fruits," which I published some years since in connection with Mr. Manning, down to the recent work by Field, there has been but little on this desideratum of soil, for with the exception of the Bartlett, there are few varieties, if any, that fruit equally well in all good soils. It is remarkable how the Bartlett will assimilate itself to almost all soils and localities; more so than almost any other fruit, not excepting the apple. I hear of its fruiting well throughout the country. J. M. I.

Salem, Mass., April, 1859.

HOGS IN OHIO.—We learn from an exchange that the number of hogs in Ohio, six months old and over, on the first day of April, 1858, were 2,554,914. In 1857, there were 2,333,778, thus showing an increase of 223,136 in the year. This prosperity should make that State bristle up.

For the New England Farmer.

DOUBTFUL ITEMS IN CULTURE.

In one of our fruit books we find the following: "Seedlings may be brought into early bearing by grafting into bearing trees, and some varieties, that are twelve to fifteen years in bearing naturally, can be made to bear in a few years by this process."

I tried this "*process*," a few years since, by placing some 10 or 12 scions from as many three-year-old seedling stocks upon a dwarf pear tree. I watched these, from year to year, as they grew, for six years; the scions grew well, but showed no appearance of flowering, and hence I felt rather doubtful that this would necessarily hasten its bearing. On the spring opening, seven years from the operation, I was sadly disappointed in finding the tree dead, root, and branch.

The same writer says:—"Foreign, and other tender kinds, may be made more hardy, or *acclimated*, by grafting into hardy, native stocks." This acclimation, as it has been called, induced the above writer to recommend raising peach trees, "from the stone *here*, as being more hardy, than if raised in New Jersey, or any warm climate." I never observed the least difference between those raised in Jersey and from seed here. I once fruited about three hundred peach trees from seed, and about the same time received one hundred and fifty budded trees from Hancock, N. J., and never, in after years, could see any possible difference in the hardiness of the former over the latter. In a conversation with the late Robert Manning on this subject, I found him decidedly of my opinion in this matter, remarking that his finest bearing peach trees were originally from the South.

Another extract:—"A fruit may be raised on a soil *not* congenial to it, by grafting into a stock adapted to such soil." This I consider at least doubtful; I have, however, never known this to have been tried. If any of your readers are able to enlighten me in this matter, I should like to hear from them.

Still another:—"By cutting off all the blossoms in the bearing year of the apple, it will change the year of its bearing." I find that most of our Baldwin apple trees bear in the *even* year, so called, and in order to *change* this to the *odd* year, one of our most experienced cultivators tried this method most effectually in the garden of his employer, without success. I have never, as yet, heard of this being done successfully.

Salem, Mass., 1859. J. M. I.

For the New England Farmer.

NEW WAY OF SALTING CATTLE.

FRIEND BROWN:—Last fall I adopted a new method for salting my cattle, and am so well pleased with it that I am induced to make it known, so that others may adopt it if they like. I bought a lump of the mineral salt, weighing 82 lbs., and put it in a dry place in my cow-yard, where the cattle can go and lick at their leisure. My stock consists of one pair of oxen, six cows, and two calves. They work upon it almost every day, and in seven months have used about one-third part of it. I think this plan has the advantage over the old one, in at least three ways, viz.:

1st. It is always by them.

2d. It is not so liable to be wasted.

3d. It is not so much care and trouble to give it to them.

The salt may be obtained of B. Thatcher & Co., No. 184 State Street, formerly 15 Long Wharf, Boston, at one cent per lb. B. F. CUTTER.

Pelham, N. H., 1859.

For the New England Farmer.

HOW I BUY, KEEP AND SELL OXEN.

MR. EDITOR:—I see by your paper that you publish the weight of some of our largest hogs, and likewise our big cattle; but you do not tell how it is done, whether on corn or pumpkins. I thought some of your readers might like to know the difference in price between working oxen and when they are fit to go to Brighton.

I will tell you the course pursued by me the past thirty years. I raise all my cows and buy all my oxen. I want them six years old and to weigh thirty hundred when bought. I weigh them when I buy, and before selling, to know something what they are worth. I will give the price paid and received, and the number of years kept.

Cost.	*Time kept.*	*Sold at*
$72,00	6 years	$115,00
70,00	1 "	95,00
105,00	5 "	98,00
85,00	3 "	112,00
80 00	3 "	110,00
90,00	1 "	105,00
95,00	2 "	110,00
75,00	1 "	110,00
50,00	2 "	170,00
No. 10, $150,00		176,00
$140,00	3 years	160,00
160,00	1 "	175,00
150,00	2 "	200,00
170,00	2 "	170,00
$1492,00		$1906,00
		1492,00
		$414,00

During that time the oxen have been the only team for farm work. I keep no horse. The following is the manner I feed: The latter part of summer they have green corn fodder. During the winter a bushel of turnips once or twice a week, according to the quantity raised. From the 1st of March, meal ground from corn and cobs, two bushels of cobs and one bushel of corn on the cobs, well seasoned with oats. Of this mixture they have a peck each day.

No. 10 I kept only twelve weeks and the pair gained 50 pounds per week on two bushels of turnips and one-half bushel of meal a day. They were not worked. I do not feed any meal without mixing with cut hay, roots and chaff, and *should think it up-hill work to feed without roots, any way.* My cows are fed with mangel wurtzels throughout the winter and spring, to which is added a little meal.

I send you some samples of Merino wool. My sheep, twenty years ago, did not shear four lbs. a head, with good care and no roots. My last sale of twelve hundred pounds—and there were no wether's fleeces—averaged 5.60 pounds.

GEORGE DEWEY.

Hanover, N. H., April 15th, 1859.

REMARKS.—Thank you, Sir. This is the kind of information we want; it is tangible; if you

can make this gain, others can, now that you have told them how you do it. A pound and a half, and a little more gain, in the fleece throughout a flock of sheep, is no mean item. The wool you sent us is very beautiful.

GRAPE PREMIUM OF $100!

We have often given the subject of *grape culture* considerable prominence in our columns, for several reasons; because we believe our people may use more fruit, as diet, and less meat,—because good varieties of well-ripened grapes are nutritious and healthful,—because from them may be obtained the finest wines for sick or infirm persons,—and because they are indigenous to our soils, natural to the climate, and may be produced cheaply in large quantities. We might add farther—and it is no inconsiderable consideration—that the homestead will be much more valuable in the market, if it becomes necessary to place it there, and its occupants will be wiser, happier and better persons, where fruitful grape vines are judiciously disposed over it, climbing a tree here, or hanging on a trellis there, or covering a portion of the dwelling itself, and giving the whole an air of neatness and repose which shall soothe and refresh the aged, and present agreeable attractions to the young.

We are glad, therefore, to present anything that will encourage the cultivation of a plant so ornamental, and whose fruit is of so much importance.

These remarks are suggested by the receipt of a letter from Mr. CHARLES H. DANA, of West Lebanon, N. H., who informs us that he places at the disposal of the New Hampshire State Agricultural Society one hundred dollars to be awarded to the person who will present the best kind of grape for garden or vineyard culture in this climate. That the committee may be able to judge correctly of the merits of each kind presented, they should be planted in the same locality, and receive the same cultivation. Mr. Dana proposes to conduct such an experiment himself by planting and cultivating all the kinds offered for this premium. New or rare kinds of grapes, sent to Mr. Dana free of expense to him, will be entered in competition for the premium. Roots are preferred, but cuttings will answer.

Cuttings of two inches in length may be sent by mail. The ends should be sealed and the cuttings wrapped in damp paper. The lists will be open for competitors during the months of April and May, 1859. The premium will be awarded in the autumn of the second year after planting. In case the same kinds of grape should be offered by different competitors, or in case different kinds should prove of equal excellence, the committee will be at liberty to divide the premium, or otherwise award it in their discretion.

There is another reason why we should urge upon our New Hampshire friends, and especially, those in the valley of the Connecticut, to give especial attention to the cultivation of the grape, and that is, the failure of the peach and plum, and the great uncertainty of the pear and some of the finer kinds of the apple.

We are certain that Mr. DANA's offer of a liberal premium is timely and judicious, and are assured that his character is a sufficient guaranty that the experiment will be conducted with fidelity and honor.

TRIMMING GRAPE VINES IN SPRING.

We are frequently asked at what time in spring we trim our vines, and have now before us two letters from subscribers on this subject. Grape vines should not be trimmed in spring. The proper time is November, and in our locality about the 25th. By trimming at that season we get rid of a large amount of surface for continued evaporation and capillary attraction, all of which is increased by winds passing over the surfaces of a larger amount of the vine; the ends where the cutting occurs are sure not to bleed when the growth commences; they may then be firmly tied without the chance of breaking or injuring swollen buds. The cuttings made from the trimmings at this season are of a better quality for spring use, and the portion not used for cuttings may be cut up in an ordinary straw cutter and buried in the ground around the vines, there to soften during winter and insure their early decay in spring, furnishing such pabulum as will make fruit. We know by absolute experiment that the same amount of inorganic material, or indeed of inorganic or organic material as is contained in the cuttings of grape vines as ascertained by analysis, taken from other and lower sources in nature, will not produce the same amount of fruit as when derived from the decayed cuttings themselves in the soil. Here each constituent has assumed a form, and as a consequence, a condition which is precisely such as is wanted for fruit-making. We mean by this that the same amount of potash and the same amount of phosphates contained in a hundred pounds of these grape cuttings, will not produce one-tenth of the effect when applied to the vine as a manure, as will the cuttings themselves. For although these more crude applications of phosphates and potash may increase the growth of wood, they do not materially increase the yield of fruit; and it is for this reason that bones, hide, blood of animals, and other manures containing inorganic constituents from animal or other progressed sources, are more valuable than those of direct mineral origin. When grape vines are trimmed in the spring, alongside of others trimmed in the fall, the difference in the quality and quantity of the fruit is quite perceptible. Occasionally, indeed frequently, bleeding will occur with spring pruning or trimming, which tends to weaken the vine, and waste the pabulum take from the soil by the roots.

It should be remembered that this is not a mere waste of water, but of all those constituents which are elaborated by chemical changes going on in the soil during the winter, and placed in proximate conditions for wood and fruit-making by the vital action of the roots in spring. With fall trimming the stand of the vine remains in degree more moist than the lower portions of an untrimmed vine. They are not called on to yield up their aqueous contents, and their capillary tubes are kept pliant and ready for early spring action. We do not approve of spring trimming of grape vines.—*Working Farmer.*

For the New England Farmer.

ON THE CULTIVATION AND USE OF BEETS.

MR. EDITOR:—It may not be generally known to the cultivators of the soil, in this part of the country, the various uses to which this root can be applied. With regard to its nutritious qualities, as food for cattle and swine, &c., all are pretty much agreed; and even in its superlative excellence as a milk and butter producing vegetable. But comparatively few may be aware of its intrinsic importance, in the manufacture of sugar, brandy, vinegar, &c., &c., and last but not least, that of paper. In a British journal, I read lately that for the last mentioned purpose, it is now extensively cultivated, both in France and England, as a field crop, for its paper-producing properties, &c., &c., and consequently, its production in these countries, and other parts of Europe, has become of no small nati nal importance. The London *Times* newspaper is now printed exclusively on paper made from beets; and as it requires seven tons daily for that gigantic journal, the saving in that material, when compared with paper made in the usual way, is said to be nearly $200,000 per annum, to the stockholders; and the quality is much superior to paper made from any other known substance; being more tough and elastic, resembling vellum, or parchment, and consequently more durable, and impervious to damp, &c., &c. In France and England, where beet sugar and brandy are extensively made, the pulp, or fibre is extracted from the syrup by means of a peculiar kind of sieve and press, made on purpose, and is generally sold to paper-makers, after undergoing a process of washing and drying, to prepare it for transportation, and is represented by recent travellers in these countries to be a lucrative and money-making business, to those engaged in it.

Now, as many sections of New England present better facilities for producing the different varieties of beets, than most parts of France, and decidedly superior to any part of Britain, both as regards soil, and climate, I am surprised that Yankee enterprise has been so long asleep, on such an interesting subject as the cultivation and manufacture of beets.

It is a well-established and incontrovertible fact, that large sums of money are paid yearly by this country to France for brandy; and that at least four-fifths, of that imported, by our most respectable wholesale liquor dealers, is distilled from the beet, instead of the grape, as by them represented; and some of our most distinguished *connoisseurs*, in such articles, have often been baffled, to detect the difference of the one from the other. That they are about alike for producing intoxication and stupefaction of the brain, is pretty much all the use of either of them; but if people will have such stuff, it may be as well to provide it for them at home, as to trouble them with sending their money to foreign countries after it; especially when such countries take little or none of our produce in return; but only our own hard specie.

A superior article of brandy, to that to be found in our first-class hotels and drinking saloons, under the name, I think, of *Cognac*, could be made in this country at from one to two dollars per gallon, and be a very profitable business to the distiller; as beets raised in these northern States produce a third more juice in proportion to bulk, than that raised in any part of Britain or France. And with a proper machine for planting the seed, at regular distances, in the row, so as to obviate the present slow, and expensive process of dropping it by hand, farmers and gardeners would find it a remunerating crop at 25 cents per bushel; provided they could always find a ready market for it; which is cheaper by nearly one-third than what the French and British manufacturers generally have to pay for it. And taking into account that eight bushels of good beets generally produce one hundred-weight of sugar; and that the pulp, or residue for the making of paper will almost cover the cost of the raw material, I do not see any very formidable obstacle in the way of making the manufacture of beets into these articles, in this country, a very profitable investment for capital, provided any enterprising individual of adequate means, or joint stock company, would take hold of it in real earnest.

Should the editor of the *Farmer* consider this subject, worthy of a corner in the columns of that interesting journal, the writer will be willing, at any time, to communicate what additional information he can, and answer any questions through the same medium, or otherwise, regarding this interesting new branch of industry, that he, the editor, or any of his numerous contributors, may think proper to ask; as the writer has had considerable experience in the cultivation of beets, and is cognizant, in some degree, with the process of transforming it into the different articles above stated; having witnessed the several operations on a large scale, in various parts of Europe.

THOMAS CRUICKSHANK.

Beverly Farms, March 21, 1859.

DEATH OF MR. HENRY PARTRIDGE.—The intelligence of the sudden death of this gentleman came to us with a startling reality. It occurred on the 19th inst., in the 68th year of his age, while he stood at the post of duty, engaged in his usual avocations. Mr. P. had a wide spread reputation as the manufacture of the unequalled manure forks, now in general use all over New England; the excellence of his work fitting well his excellence of character. He was an upright, worthy man—a man whose usefulness to the world will not cease with his departure; his

good example will long be fresh in the memory of those who knew him, and continue a blessing to the world.

For the New England Farmer.

CORN VERSUS ROOTS.

I am really fearful lest you should be wearied with communications upon the subject of "*Root Crops*," notwithstanding I feel under obligations to reply to a few additional queries relating to this matter, proposed to me in the last *Farmer* by Mr. BRIGHAM, of Westboro'.

In referring to ruta bagas, he inquires as to their value when compared to corn, and instances his raising a crop of bagas at the rate of 1000 bushels per acre, and thinks he realized less profit therefrom, than he did from a crop of corn 75 bushels to the acre.

In reply I would say that so far as my experience goes, an acre of land that will give 75 bushels shelled corn, ought, all things being equal, to give 1200 bushels bagas, i. e., this would not be a more extravagant yield. The crop of bagas would weigh, at 60 pounds to the bushel, 20 tons —the crop of corn, at 60 lbs. to the bushel, would be 2¼ tons, a very large difference here—about 13 times the amount in weight. And as to feeding properties, will any one doubt but what one bushel of bagas, weighing 60 pounds, will go as far in producing milk or making beef, as 2½ quarts, or 5 pounds, of corn?

Indeed, every one who has had any experience in feeding the two, cannot but see at once that facts and figures are vastly in favor of the roots.

The truth is, that when judiciously cultivated, we obtain such enormous crops of the esculents that they cannot but be profitable, even (I was about to say,) if they are not worth much. A man can hardly raise 20 or 30 tons of bagas or carrots from an acre, and feed them to his stock properly, without their telling to advantage, both in his facilities for keeping stock, (and we know it is an established axiom, "the more stock the better farmer,") and also adding greatly to the compost heap; which last should always be taken into account when rating the usefulness of any crop.

Mr. Brigham, at the close of his article, refers to the labor of feeding roots. Sure I am that this cannot be great, with the use of a good root cutter that will readily slice a bushel a minute—an implement indispensable to every one using roots in any shape. WM. J. PETTEE.

Salisbury, Ct., 1859.

For the New England Farmer.

BARN CELLARS FOR MANURES.

There is, in my opinion, no place better to manufacture our compost manure, than in a barn cellar. I think I have the means of judging, as I have had some fifteen years' experience in making and using manure without, and about fifteen years with, the benefit of a barn cellar, for the purpose of composting.

In the first place, the liquid, as well as the solid droppings from the cattle, can all be saved by having it composted with meadow mud and loam, of which there must be a good supply in the cellar, so that it can be ready at all times to mix with the droppings. Much of the work may be done in rainy or stormy days; this I consider to be quite a saving to the farmer.

In a barn cellar, the compost heap can be kept in a right temperature. If it is not sufficiently moist, water, suds or slops from the house may be turned upon it to keep it sufficiently wet, and no more.

Manure managed as above, can receive no damage from drying, or fire-fanging, as some say it will in a barn cellar. Again, it is not wasted by the winds and drenching rains, as it would be if out in the open weather.

Another advantage is, it can be carted out upon grass lands in the fall or winter season, and on soft meadows, while they are frozen, and where manure cannot be conveniently carted on at any other time.

I think the best place to keep manure, is in the barn cellar, until it is wanted for immediate use, although it is almost a universal practice in this region to draw out their manure in the fall, and lay it in piles for spring use. I think in so doing, the manure must lose much of its strength.

Cordaville, March, 1859. JAMES HAWES.

For the New England Farmer.

NEW ARRANGEMENTS FOR A BARN.

MR. EDITOR:—The barn I propose to build, will be from eighty to one hundred feet square, with a cellar under the whole; the cellar to be ten feet high or more; if possible, the lights and entrance on the south side. I propose to have a good and separate pen for each horse, cow and work-ox, the pen to be twelve by twelve feet, well fenced, the feed to be dropped from the barn above, through apertures made for the purpose. As soon as the weather will permit, I propose to haul in as much dry soil and swamp muck as I possibly can, so as to have it ready to commence my winter's work. As soon as I turn my stock into their pens, or rather a little before, I will put into each pen as much swamp muck and soil as will cover the entire surface one foot deep, all over, or one hundred and forty-four square feet; and as soon as the trees drop their leaves, gather them with brakes, for litter to cover the soil lightly, two or three times per week; and once a week, when the stock has trodden and trampled the whole mass well, take a shovel and turn the whole upside down; repeat this operation for four weeks; then remove the manure thus made to a suitable part of the cellar. Again fill your pens as before, and repeat the operation. The stock must be simply turned into their separate apartments, without any tying of any kind. I turn them in loose, but take care to secure the doors of the pens so as to avoid any mischief resulting from their getting together. I also propose to cut and steam all the hay and other feed, or a great part of it. I mean to follow out the same plan in summer, by turning the stock in at night, instead of yarding them, as we have done before, so that I may make one-half as much manure in summer as in winter. By this system I expect to save all the liquid and solid manure that the stock will make. I shall also have all the salts, &c., pertaining to the same, absorbed by the soil. JOHN H. CONSTANTINE.

Campton Village, N. H., 1859.

For the New England Farmer.

DRAINAGE—POWER OF SOILS TO RETAIN MANURE.

BY JUDGE FRENCH.

Effect of Manure not Permanent—What becomes of it—Four ways by which it goes off—Draining helps to keeps it—Lord Bacon's mode of obtaining Fresh Water from the Sea—How Soils Retain Manure—Clay Absorbs Ammonia—Also Lime and Potash—Burnt Clay Absorbs less—Absorption of Organic Matters—Liquid Manure Filtered by Clay—Sewer Water and Flax-Water Purified by Filtering—Solutions of Logwood and other Dyes deprived of Color by Clay—Skunks Sweetened by being Buried—How much an Acre will Retain—Practical Conclusions.

Every farmer knows that the effect of manure upon land is not permanent. A new application of some kind of fertilizer is necessary, at each rotation. It is matter of common observation, too, that some lands hold manure much longer than others, and especially, that sandy land requires more frequent manuring than a heavier soil of clay. There seem to be but four methods in which manures can be taken from the soil. The first is by escaping into the air, by evaporation, as it is usually termed; the second is by being washed from the surface by heavy rains, or by the melting of snow in spring; the third is by washing down or sinking through the soil, and the fourth by being taken up by the growing crop, and becoming part of the harvest.

Draining prevents surface washing by allowing the water to pass into the soil, instead of running away upon the surface. It tends, too, to prevent the escape of manure in the form of gases, or by evaporation, because it makes room for it to sink down into the soil. The object next to be attained, is to retain the fertilizing elements in the soil, within reach of the roots of the growing crops, long enough for the plants to appropriate them.

The objection that draining leaches out of the soil the elements of fertility, has been practically answered, by the opinions of learned practical men, and by observations upon the quality of drainage water, showing that in general, deep drains discharge pure water, while shallow drains discharge water charged with fertilizing substances.

As certain soils are known to part with manure much more speedily than others, it may be well to inquire more critically into the reason of this fact, as bearing upon the question at what depth it is safe to draw off the water from cultivated land, so as not to take away with it the food which should nourish the crop.

One obvious mode by which soils are capable of stopping the descent of manure through them, is by straining out, as it were, the grosser particles of matter. This is merely mechanical, and depends upon the coarseness or fineness of the particles of soil. Common salt, it is supposed, does not escape by evaporation, and is not much, if at all, taken into soils by absorption, yet it is, to some extent, retained in the soil by attraction. The particles dissolved in water are carried downward, and finding particles of soil not saturated with water, are attached to them, and remain till washed away or taken up by plants.

Lord Bacon, in his "Sylva Sylvarum," speaks of a method of obtaining fresh water, which was practiced on the coast of Barbary:—"Digge a hole on the sea-shore, somewhat above high water mark, and as deep as low water mark, which when the tide cometh, will be filled with water fresh and potable." He also remembers "to have read that trial hath been made of salt water passed through earth, through ten vessels, one within another, and yet it hath not lost its saltness, so as to become potable, but when drayned through twenty vessels, hath become fresh."

Dr. Stephen Hales, in a paper read before the Royal Society, in 1739, on "some attempts to make sea-water wholesome," mentions that "sea-water being filtered through stone cisterns, the first pint that runs through will be like pure water, having no taste of the salt, but the next pint will be salt as usual."

Mr. Bernays, in the *Agricultural Gazette*, in October, 1849, describes some experiments of his filtration. He found that a solution of common salt was diminished in strength by filtration through a soil, and that the diminution was in proportion to the *depth* of the filtering column.

Professor Way, in a valuable article "On the Power of Soils to Absorb Manure," to be found in the eleventh volume of the journal of the Royal Agricultural Society, gives a series of careful experiments on this subject, some of the results of which will be stated.

His opinion is, that the power of soils to absorb or retain manures is due partly to capillarity or attraction, and partly to chemical action, but he thinks there is a power beyond these, and indefinable, at present, which some soils, and especially clays, possess to retain the mineral bases and animal and vegetable ingredients of manure.

The power of clay, whether pure or mixed, to absorb ammonia, is well known.

Prof. Way also proves that clays have power, to considerable extent, to absorb caustic lime and its carbonate, and also potash and magnesia. Contrary to the received opinion, he found that the absorptive power of clay is diminished by burning, although it is well known that some clay soils are much improved by burning the surface, and that burnt clay is on some soils a valuable manure. Mr. Pusey says "The action of burnt soil rests, I believe, on some distinct principle, not hitherto understood."

Indeed, the attempt to solve the mysteries of vegetation by the tests of chemical science, will

always be fruitless. There is a power in the vital principle, whether in animal or plant, which controls chemical action, and defies the laws which govern dead matter. How and why some substances promote vegetable or animal growth, while others destroy life, science can probably never ascertain. It is profitable, however, to note carefully, the practical results of experiments, although we are obliged to confess that they are inexplicable.

Some facts stated in the article referred to, as to the power of soils to absorb organic matter, and to purify the most offensive substances, are both interesting and useful. Mr. Huxtable had stated that he had made an experiment in the filtration of the liquid manure in his tanks, through a bed of an ordinary loamy soil, and that after its passage through the filter-bed, the urine was found to be deprived of color and smell—in fact, that it went in manure and came out water. Prof. Way gives a series of experiments which corroborate the fact stated, as to the action of soil in removing color and smell from putrid substances. He says:

"They have been repeated with many different soils, and, under every possible combination of circumstances, but still with the same effect.

"Similar results were obtained by acting upon putrid human urine, upon the stinking water in which flax had been steeped, and upon the water of a London sewer. That the power of the soil, in all these cases, is due to the *clay* contained in it, there is not the slightest doubt; many similar experiments were made with sand, but although the color, so far as it was due to suspended matter, was in some degree reduced, the offensive character of the solutions was but slightly modified. Solutions of different coloring matters, such as those of logwood, sandal-wood, cochineal, litmus &c., when filtered through, orshaken up with a portion of clay, are entirely deprived of color."

The learned professor also states that he has been told that the American Indians are in the habit of taking skunks and burying them in the earth, by which means they are speedily deprived of their offensive odor, and rendered fit for food. Most New England people probably know that the garments of boys who have come in contact with that same spotted animal, are sometimes deodorized by burying them for a time in the earth. It is said, too, that nothing will so soon remove the smell of onions from a knife, as leaving it in the ground. The extent of this power of absorption is an all-important inquiry. How much manure will a given quantity of soil absorb and retain for use? We have seen that this depends very much upon the proportion of clay which it contains.

Professor Way found by experiment with sewer-water and clay, that four pounds of the clay used was sufficient to filter five pounds of the sewer-water, so as to deprive it of color and smell, and nearly all its fertilizing properties. The soil of an acre ten inches deep is estimated to weigh 1000 tons, so that it would seem that 1000 tons or 224,000 gallons of such sewer-water might be poured upon an acre of such clay, and most of its fertilizing properties be retained in the ten inches of surface soil.

Most soils, however, are by no means so pure clay as that used in this experiment. Again, the soil of a field is not equally permeable as that used in a small experiment, and all clay soils contain splits or fissures which let down water perpendicularly to considerable extent.

The practical conclusions from the facts and principles stated would seem to be,

That sandy lands, in which roots strike deeper than in clays, are in more danger of loss by the sinking of manures, and require deeper draining to retain them:

That such lands are improved by claying:

That, as the power of a soil to absorb manure depends on its bulk, or in other words is limited, the deeper the drains within the reach of the roots of the crop, the better the security against loss, because a greater mass of soil is fitted for absorption, and for the penetration of roots.

For the New England Farmer.

TURNIP CROPS---WINTER WHEAT.

Mr. Editor:—In looking over my January number of the *N. E. Farmer*, (monthly,) I have been somewhat interested in the discussion of the root crop there presented. Most of the writers are of the same opinion as myself, that the raising of turnips is profitable, as well as being a crop that is just suited to the wants of the farmer. I never have raised turnips very extensively, but always have fed out more or less to my cattle during the winter and spring, and consider them a very healthy food. Some object to giving them to milch cows because they give the milk and butter a turnip taste, but I never have experienced any trouble of this kind when given in moderate quantities.

In order to keep a stock of cattle in a healthy and thriving condition they must be supplied with a variety of food. Most of the farms of New England possess soils that are adapted to growing the different kinds of grasses, grains and roots, and these seem to be what every farmer needs. Perhaps on some of our New England farms, a certain kind of product can be raised more advantageously than another; as, for instance, on a very moist or wet farm, Indian corn cannot be grown with the same profit as grass; therefore it would be judicious for the owner of such a farm to direct his attention to raising grass more than to anything else; but farms containing equal soils all over them, whether of a wet or dry nature, are rare.

My advice to farmers owning lands that will produce the various farm products profitably, is to raise a medium quantity of each, rather than to grow all roots and no corn, or all corn and no grass.

I will not deny the assertion of one of your correspondents that the corn crop is *the* crop of New England, but let other crops receive their due attention. Turnips are not raised so extensively in this vicinity as they ought to be, from the fact that half the people do not know their value, and the reason why they are so ignorant of their value is because they never had any of them to actually test their worth. I never have known any one that raised roots for stock, to abandon it after a fair trial, but on the contrary, to raise more.

What kind of winter wheat would you recommend to be sown in this vicinity, and about what time of year should the seed be put into the ground? Would not a light dressing of composted manure, plowed in just before sowing, be a benefit to the wheat as well as to the after crops of grass? G. W. D.

Derry, N. H., February, 1859.

REMARKS.—The Winter Blue Stem is an excellent variety.

Get in the crop as early in September as possible, so that it shall get well rooted, and not so liable to be winter killed.

ROOT CROPS FOR STOCK FEEDING.

We beg again to remind our readers, particularly those who are engaged in dairy and stock farming, to appropriate a full amount of land to root-growing. Carrots, beets, turnips, parsnips, may all be raised with profit, wherever stock is to be fed. For horses, carrots are invaluable For milch cows, they not only furnish a milk of superior flavor, butter of fine color and odor, but when used as a portion of their food, they guarantee a healthful condition. The power of the pectic acid of the carrot to gelatinize all vegetable matter held in solution in the stomach, puts its contents in such a condition that the peristaltic motion of the intestines can manage it. Flatulence is prevented, and thorough digestion secured. The dung of the horse, fed partly on carrots, never contains the undecomposed shell of the oat, nor large amounts of starch unappropriated: and it is for this reason that a bushel of oats and a bushel of carrots will do more for the horse than two bushels of oats; and not because the carrot contains as much flesh-making material as the oat, but because it causes all the flesh-making material of the oat to be appropriated instead of being voided with the excretia. For cows and oxen, other roots may occasionally be substituted with profit, as variety to all animals is pleasing in their food; and no one root should be continuously used. Since the introduction of pulping machines, pulped roots mixed with cut hay, cut straw, and other cheap material, add much to the economy of the farm as well as to the health of the cattle.—*Working Farmer.*

LICE ON CALVES.—I have discovered a method of ridding calves of lice. *Give them flax seed.* I am wintering eight calves; they became very lousy, and I fed them half a pint at a time for two days, and the oil from it drove the lice all off.—*Genesee Farmer.*

For the New England Farmer.

PLOWING---MANURING---PLANTING.

MR. EDITOR:—Plowing and planting time being near at hand, I shall venture a few suggestions to your farming readers. Plowing and preparing the ground for seed, is of vastly more consequence than is generally supposed, or conceded by the farmer. To plow when the soil is wet, leaves it to dry in the sun, hard and cakey. The young roots of the vegetables struggle, and are headed off at all points by this baked, brickey soil that yields so ungraciously to their seeking desires.

There is great need of more attention to the preparation of the soil. The farmer that plows his field but six to seven inches deep, is very careful to spade his garden twelve to fifteen inches, that it may be light as an "ash heap," and that he may boast of a "good garden," if nothing else. This same friability and deepening the soil, measurably applies to every crop. Corn, grains, potatoes, need this deep, mellow soil. Even a tree, with its more stubborn roots, requires it. Hence the necessity of deep plowing and pulverization. If my soil was but six inches deep, I should plow nine inches, unless I have a quicksand bottom—vegetable roots will soon find the soil, reap the benefit, and you will have an augmented crop.

For a corn crop, first plow deep, then spread manure, and cross plow it in to the depth of five or six inches. I should do this, even had I but a small quantity, rather than manure in the hill. I give a reason for so doing. In the first place, the roots of corn do not stop in the hill, like those of a plant in a flower pot; they soon diverge from it, seeking nourishment in their journey in all directions, a long way from home. Now, the reasonable conclusion is, manure distributed through the soil, is what they are after, and what they will find.

How common it is to see the young corn yellow and decripid, from the fact that it is dropped on green, strong manure, (always laid to the weather,) and cannot attain a vigorous, healthy color till its roots get away from this hot-bed hill. But the farmer says, I am short of manure, I must put four acres into corn; all I can count on, is thirty cart loads; I must dung out in the hill. Now, he plows, plants and cultivates four acres, and may get eighty or ninety bushels of corn. I say, put the thirty loads of manure upon one acre, plow in at the cross plowing, and hazard the statement, the one will give the product of four acres, to say nothing of labor and cost, being about three to one. In this connection, let me ask, would not corn do better, if the kernels were dropped several inches apart, to avoid the crowded state of the hill while growing? Try every other hill.

In regard to potatoes, there is no dunging in the hill on this island; they spread horse manure (if they can get it,) and plow in deep. In pulling potatoes, it will be noticed their tough, fibrous roots run far outside the hill. A mellow soil, well impregnated with manure, must also attract these roots, which are the great feeders in giving growth and perfecting the vegetable. The vine receives its nutriment from the air, and its short, brush-like roots at its base, connecting

itself with the potato, with a tough umbilical cord, showing its relations to each.

We also know that grain roots require a deep soil for a successful crop, particularly on clayey subsoils; many of your agricultural works tell you, they dive deep.

Boast not of acres, let the crops do the bragging. The true motto should be, good cultivation pays. H. POOR.

Brooklyn, L. I., 1859.

A NEW WORK ON DRAINING.

FARM DRAINAGE. By HENRY F. FRENCH. The Principles, Processes and Effects of Draining Land with Stones, Wood, Plows, and Open Ditches, and, especially, with Tiles; including Tables of Rain-Fall, Evaporation, Filtration, Capacity of Pipes; cost and number to the acre, of Tiles, &c., &c., and more than One Hundred Illustrations. New York: A. O. Moore & Co., Agricultural Book Publishers, 140 Fulton Street. Sold by A. Williams & Co., 100 Washington Street, Boston.

We have been anxiously waiting for this volume for some months, and greet its appearance with much pleasure. It is a book for the times. The subject of Draining has been for several years past engaging the attention of the farmers in the Northern and Middle States, and every reliable source of information has been eagerly consulted. Almost the only systematic and scientific information has been derived from English works. But there have been great doubts whether English methods were adapted to our climate and soils, and especially, whether the same results would be realized here that have been reached in that country, and indeed, the opinion has been by no means universally accepted that there is the same necessity for drainage, under our scorching sun and clear sky, as in foggy England, where the "Demon of vapors descends in a perpetual drizzle," and keeps the atmosphere in so moist a state, that evaporation goes on at a much slower rate there than here.

Judge FRENCH has given us an interesting comparison of the meteorology of old England and New England, and the result of the comparison is that draining is even more necessary in this country than in England. In this country the ground is frozen solid to the depth of two or three feet, and in the spring, is completely saturated with cold water, which renders the soil unfit to be worked, until the season is so far advanced, that there is scarcely time for the growth and ripening of the crops. But thorough draining, it is contended, will take off the water as soon as the ground is thawed, and the soil can be worked and the seed got in three or four weeks earlier, so that the crops may have so much longer time to grow and ripen. The statements and reasoning of Judge FRENCH are clear and satisfactory, and will afford to many farmers that information which they so much need.

Another important feature of the book is, that it does not encourage indiscriminate draining, as the sovereign remedy for all failures in agriculture. Until land is more valuable than it is in most parts of New England, a proper selection must be made, and draining resorted to only where it will pay. An interesting history of draining is given, and the various methods discussed. The proper depth of draining occupies a very important place in the discussion. The manufacture of tiles, and the proper sizes to be used, and the various implements needed in the operation, are described and well illustrated by cuts, making the whole subject plain to any ordinary capacity. Various tables have been prepared by the author and his assistants, containing much valuable information. We commend the book to all interested in draining, and to all the farmers in the country.

The author commenced the draining of his own land some years ago, and not finding the instruction he needed to guide him, had to work his way, as best he could, and after some mistakes and failures, by careful thinking and observation, he arrived at satisfactory results, and became fully convinced of the importance of draining to the successful practice of farming on many of our most productive lands. During his own operations he acquired much valuable information relating to the subject, and with true public spirit he determined to impart this information to his brother farmers. He has spared no pains or expense to make his work reliable and useful, having gained not only all the informatian he could from books, observation, and actual experience in this country, but visited and conversed with the most practical men in England, and carefully studied the various modes of draining in that country. It is written in his usual easy and pleasant style, and is the most valuable book upon the subject that has ever been written on either side of the water.

The farmers of this country are certainly under great obligations to him for this extra professional labor, undertaken and carried to a successful issue, under a press of business that would have deterred any man from engaging in it who had not a sincere love of farming, and an earnest desire to promote it.

HOME-MADE FURNITURE.

The simplest and cheapest kind of furniture, by which an air of taste may be given to a cottage, consists of a plain box or bench, made of boards, by the hands of the master of the dwelling, stuffed with hay, corn-husks, moss or hair, held in place by a covering of coarse canvas, and covered with chintz by the mistress of the cottage. Seats of all kinds are made at a very trifling cost in this way; so that, with a little ingenuity, a room may, by the aid of a few boards nailed together, a little stuffing and canvas, and a few yards of shilling chintz, be made to pro-

duce nearly the same effect as one where the furniture is worth ten times as much. The next step is to add square pillows or cushions to all the benches, seats or couches, in order that any person sitting upon them may have a support for his back without touching the wall. Another of the cheapest and simplest seats for a cottage, is the barrel-chair. These chairs are easily made by sawing off a portion of the barrel, nailing on a few boards to form the seat, and leaving a part of the staves a little higher than the others, to form the back or arms. To make the high-backed chair, the staves must be pieced out a little, the outside or rim of the back being confined in its place by a piece of hoop, neatly applied. The seat and back are stuffed with any cheap material, covered with chintz.—*Downing.*

MARKET-DAY AT SOUTH DANVERS.

[REPORTED FOR THE FARMER BY J. M. IVES.]

Tuesday last was market-day at South Danvers, under the auspices of the Essex Agricultural Society. These market-days have been in successful progress in Great Britain for many years, affording an opportunity for exchanges, sales of neat stock, and other agricultural products. It was held on Washington and Foster Streets, within sight of the birthplace of George Peabody, of England, who has been such a patron of that town. Early in the forenoon, vehicles of various kinds, droves of sheep and cattle, fowls, &c., were wending their way in "cattle-show fashion." Among the collection of cattle were 4 new milch cows with their calves, from R. Hanley, of Lynn; W. P. C. Patterson, 3 native cows; Albert Lodge, of Beverly, 2 Jersey cows and heifer; Charles Roberts, heifer 3 years old, heifer, Ayrshire, mixed and native cows; working cattle, from John Brown; 40 sheep and 55 lambs, from E. Page, of South Danvers; J. W. Wilkins, cows and heifers; P. D. Patch, of Hamilton, one yoke of fine, fat Durham oxen; P. L. Osborn, bull 21 months old, weight, 1320 pounds; Chester and Suffolk boar, from W. H. Foster, Beverly; M. Brown, Ipswich, cow and ox; Amos King, cows; George B. Dodge, of Hamilton, one yoke of cattle; S. Dane, of Hamilton, new milch cows and beef cattle; E. S. Poor, Danvers, two colts, valued at $300 each; Hugh Galbreith, 5 cows; John Needham and John Brown, Jr., cows; town of Danvers, one yoke of fine, fat oxen; R. S. Fay, of Lynn, cows; Lewis Fay and Thomas Brown, cows; J. S. Needham and N. Page, Jr., of Danvers, Lake, of Topsfield, and Flint, of North Reading, fruit and ornamental trees.

There were various agricultural implements offered for sale. Ketchum's mowing-machine, for one horse, attracted much attention; Whitman's patent plowman, for guiding the plow, was in operation, on Gen. Sutton's farm, but did not work as well as was anticipated; a fine apple-parer was offered at $5, which performed well. The stock at market were as follows: 85 milch cows and calves, 37 steers and heifers, 9 bulls, 5 pairs of working oxen, 13 fat ditto, 18 calves, 36 horses, 4 colts, 1 stallion, 112 pigs, 96 sheep and lambs, besides 6 or 8 boxes of fowls, potatoes, wagons, &c., on sale.

SALES.—There were a considerable number of private sales of cattle, &c., in the morning, previous to the auction. Among them were the following: 4 three year old heifers of Joseph Batchelder, of Wenham, $26 each; native cow and calf of E. W. King, $45; one yoke of fat cattle, belonging to the town of South Danvers, weighing 3400 pounds, at $9 per 100; one yoke of working oxen, from George B. Dodge, of Hamilton, 5 year old, $108; one pair of Durham, *full blooded*, from Paul D. Patch, of Hamilton, and fed by him 4 years, $10 per 100; these oxen were 5 years old, girth 8 feet, estimated net weight after dressed, 3000 pounds; 2 native cows, 8 year old, with calves, from J. W. Wilkins, for $40 and $31; a native cow, 6 years, from Col. Batchelder, of Middleton, $45.

AT THE AUCTION SALE AT TWELVE O'CLOCK.—The Huntington cow, of R. S. Fay, native breed, $43; Rodman cow, $44; Boston do., one-half Ayrshire $48; native heifer and calf, from Mr. Gilbert, of Beverly, sold for $28; do. from Mr. Kittredge, $39; do. from Mr. Dane, of Hamilton, for $34 and $35; female goat, $8; some 6 or 8 horses sold at prices varying from $35 to $160, each.

The market was much more successful than I could have anticipated, from the misgivings which had previously been expressed; in fact, I think it may be justly considered a successful experiment, and I am "right glad" that "old Essex" has led off in such an enterprise.

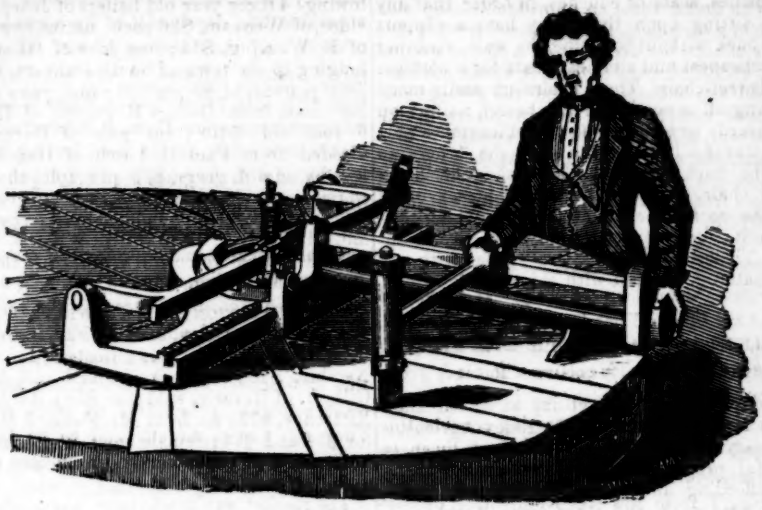
A meeting of the Trustees of the Society was held in the Warren Bank building at 10 o'clock, at which opinions, &c., were offered. Mr. Fay, of Lynn, in the absence of the President, presided; it was

Voted, That North Andover be recommended to the farmers of the county as a market for the sale of stock and agricultural products to be held on the third Tuesday of May, and that the farmers be invited to attend the same.

It was also voted, that Gen. H. K. Oliver, of Lawrence, Jos. Kittredge, of North Andover, J. H. Morse, of Lawrence, J. Osgood Loring and Otis Bailey, of North Andover, be a committee to superintend the market to be held at that time and place. Messrs. B. Perley Poore and Dean Robinson, of West Newbury, Enoch S. Williams, of Newburyport, and Paul Titcomb, of Newbury, were appointed a committee to report on the expediency of holding a subsequent market-day at, or near Newburyport; and to fix the time for the same. It was also voted that the committee on the market at South Danvers report to the Trustees a full account of the same. The Trustees then adjourned to meet at North Andover on the third Tuesday in May, at 10 o'clock.

One of the greatest annoyances at these gatherings is the numerous "catchpenny contrivances, and noisy, discordant sounds from drums and fiddles, in such near proximity to the market, and I would suggest to our Trustees that they endeavor at the next market to secure a field or enclosure, where these nuisances may be further removed, that they may not interrupt or interfere with the Auctioneer or those of the society in the performance of their duty.

May 4, 1859.



DRAPER'S MACHINE FOR DRESSING MILL-STONES.

The above cut represents *Draper's Improved Patent Machine for Dressing Mill-Stones.* The subscribers present it to the public with perfect confidence, as one of the most labor-saving machines in use, while from the uniformity of stroke and perfect adaptation of the chisel to the stone, one-half, at least, of the expense of sharpening tools is saved, and the character of the dress much improved.

The machine being attached to the spindle of the mill, is put in motion by the revolution of the same, being capable of striking eight hundred times in a minute, with a convenient arrangement for graduating the stroke to any required weight, and adjustable to any draft, doing the work with a precision not easily acquired by hand-dressing, and being wholly under the control of the operator. It is readily adapted to any kind of dress for either burr or granite; for the latter, the time usually required for dressing is from ten to fifteen minutes, and for burr, from fifteen to thirty, cracking the face in perfect lines, parallel with the furrows, without breaking the surface between the lines, thus producing a much more perfect dress in one-eighth part of the time required for dressing with the hammer. Thus the stone is preserved for longer use, and makes more, and a better quality of meal, in the same time, than by the usual method of dressing. To the most ordinary observer, the advantages must be obvious. Application may be made to the subscribers, at South Dedham, Mass.

T. W. & R. M. DRAPER.

THE HORTICULTURIST.—The number of this popular journal for May is a capital one. The "leader" by the editor, upon "Life in the Country Railroad Cars," seems as natural as the way to breakfast. We have been in those cars, sometimes, and have had ocular and olfactory experiences there! As Sancho Panza said of the "man who invented sleep," so say we,—"blessings on the man who will devise and put in execution some mode of correcting the evils of our gregarious mode of railroad travelling."

This number of the *Horticulturist* is eminently practical. See the article on "The Useful and the Beautiful, in Gardening;" one on "Bad Grafting—How Wood is formed"—with illustrations; and one on "Budding and Grafting." The frontispiece presents a fine, colored engraving of the "Hartford Prolific Grape." Published by C. M. Saxton, New York.

For the New England Farmer.

TURNIPS.

As the turnip ordeal was passing, I was feeding out my crop of some eight hundred bushels. To gratify your correspondent at Lowell, Vt., I wish to say I rolled them from the root cellar to the barn floor in a wheelbarrow, there split them up with a long handled square pointed shovel, an implement of the cow-house, and shovelled them into the mangers. When they were given to the dairy cows, it was directly after the morning's milking. Whether they "thinned or thickened, increased or diminished, the quantity of milk," my observations do not allow me to say. The improved condition of the animals, indicate that their products during the whole of the coming season will be materially increased both in quantity and quality.

The time saved from the fifteen minutes per bushel, which it took the hired man of your Massachusetts correspondent to feed them out, to-

gether with witnessing the gratitude of the animals receiving them, amply paid for doing it myself. I did not raise them as did your correspondent, who found them an unprofitable crop side by side of a corn-field, that produced seventy-five bushels of corn per acre, but on a plot of ground so cold and ill adapted to corn, it would not have produced ten bushels. I hope the present season, those who hold the turnip culture in the least esteem, will not fail to raise enough to give their animals as feed, as often as they provide their families with fresh fish, or perhaps some other less frequent change in the variety of food.

Waitsfield, Vt. S. P. JOSLIN.

SORREL.

This grass should be cut early. If permitted to stand till the seed has become fully matured, the crop not only proves worthless in itself, but an injury to the soil. By cutting when it is green and succulent, or before the seed has shattered out, we obtain an article possessing considerable value, and which is eagerly devoured by sheep and horses, besides accomplishing much towards eradicating it from the soil from which, ordinarily, it is expelled not without considerable difficulty when once it has obtained root.

In curing sorrel, care should be had to expose it as little as possible to the sun. We have found it an excellent plan to mow in the morning, and cock in small bunches as soon as the dew is off. This plan prevents the seed, by far the most valuable part of the crop, from being wasted, as well as much useless trouble in spreading and cocking up. There are few seeds, perhaps, more tenacious of life than the sorrel. The pericarp or seed vessel, in which the vital germ is enclosed, is singularly firm and indurated, and when, by any chance, it becomes imbedded in the soil to a depth which excludes it from warmth, it remains dormant, and will retain its vitality, unimpaired, for years. If a field which has produced sorrel in large quantities, be turned out to pasture, it will, on being again plowed and subjected to tillage, even after the lapse of many years, become filled with sorrel plants, although not a vestige of that plant has been seen during the interregnum, or while in pasture. And this is sometimes the case with other plants. We once plowed a pasture which had been grazed for twenty-five successive years, and upon which scarcely a mullein had been seen during all that time. Upon disturbing the soil it brought the long imbedded seed to the solar influences and the air, and the surface was covered before July with so luxuriant a crop of mulleins as to make it necessary to pull up and carry off cartloads of the plants. By sowing lime, in liberal quantities, and taking especial care to eradicate and destroy all the plants that appear, the pest may be entirely overcome. The lime neutralizes the peculiar acid which gives life and sustenance to the weed, and by converting it into a healthy and salutary pabulum for more profitable species of vegetable life, deprives it of its appropriate nutriment, and thus starves it out. Clayey soils rarely become infested to any considerable extent with this production. When it does make its appearance upon them, it is generally attributable, as a result, to the seed having been disseminated with the grass seed employed in stocking down, and rarely lasts more than one year, when it is crowded out by the cultivated grasses, generally without maturing its first crop of seed. It requires a high, dry and hot soil, and does not flourish vigorously except in the very face of the sun. Sandy lands, of all descriptions, produce sorrel more or less abundantly. And it is this description of soils which are always the most remarkably benefited by ashes and lime. They are non-calcareous, and to be improved, and rendered permanently productive, must be supplied artificially with that of which they ar deficient.

TOMATOES.

Physicians are unanimous in their recommendation of this vegetable. Its nutritive character has procured it many friends, and perhaps there is at present no vegetable in this country, which is more extensively cultivated, or which commands, in our principal markets a more ready sale, or a more remunerating price. It delights in a free, warm and rather vigorous soil, and should be assisted in its development by liberal and continued applications of old and invigorating manure. It is remarkably prolific, one plant often producing a bushel of fruit. The maturation of tomatoes does not take place at once, but the fruit ripens in succession, so that the branches are burdened with ripe and green fruit at one and the same time. The methods of cooking and appropriating tomatoes have been varied to an almost infinite extent. In all its forms, however, it has innumerable admirers, and is probably, at this day, the most popular of all our garden edibles. For family use, a few hills, planted as soon as the soil can be suitably prepared, in the spring, will be sufficient. Guano and gypsum have a very favorable effect on the tomato.

COMMISSIONERS ON FLOWAGE.—The Board of Commissioners appointed at the recent session of the Legislature, will meet at 12 o'clock, noon, on Monday next, to enter upon their view of the land flowed. After this examination, which will probably occupy two or three days, they will give a hearing to the petitioners at the Town Hall, in Concord.

EXTRACTS AND REPLIES.

TWO SICK COLTS.

In looking over my last *Farmer*, I noticed a piece written by "W. D. Searl," concerning a sick colt, and as I have had two sick, in precisely the same way, one last year, and one this, I think I can give him a little light on the matter. The one that was sick last year, got over it after laying on the barn floor about two months, but has not done very well since; the one this year was sick about three weeks and died; she had the appearance of being hurt across the small of the back, would walk on the end of the hoofs of the hind feet, with them drawn forward; they finally got so stiff, that she lost the use of them entirely. In the fore part of her sickness, she would lie and groan terribly; when she died, I thought, I would learn, if possible, what ailed her, so I sent, and got my brother, and we opened her, and in the maw, we found the trouble. It was the bots—there was a spot the bigness of a man's hands entirely covered by them, and caused such a fever, that the lungs were swelled to more than twice the usual size. That is what causes the difficulty in breathing. It was generally thought she was poisoned. Now I think if friend Searl will doctor his colt for the bots, he will cure him. O. T. WILLARD.

Bolton, Vt., 1859.

POPPIES VERSUS BUGS.

Last season I had some beautiful vines of different kinds growing in my garden, which promised a bountiful supply. One morning, I found them covered with bugs, and, being about to leave home for several days, hesitated a moment as to what I should do for the tender plants. My eyes immediately rested upon some poppies, and the thought occurred, that the leaves might be a remedy against the ravages of the bugs. I instantly gathered some, and laid the leaves upon the hills, around the plants, and under the leaves. After an absence of several days, I returned, and immediately repaired to the garden, to learn the fate of my vines. They were looking finely, and not a bug to be seen of any kind. Whether the poppies had any thing to do in driving away the devouring insects, some may question. Suffice it to say, they decamped instanter, and my opinion is, they are not partial to the opium quality of poppies. If this will serve the interests of the gardeners, you are at liberty to publish it. N. R. WRIGHT.

Paper Mill Village, N. H., April 21, 1859.

TO CURE KICKING COWS.

Place the animal by the side of a stall, or plank partition, and confine her head in stanchions, or by a chain, so that she can neither move sideways or forward and back. Pass a rope, having a slip-noose on the end, around both hind legs, just above the gambrel. Draw this pretty tight, and the cow will soon find that the more she kicks, the more she hurts herself, and will generally be cured of the propensity in a short time. The pain of this operation, if the animal struggle violently, is quite severe, and will render the cords of the legs stiff for a time, but the cure will be permanent. Care must be taken not to let the rope get below the gambrel joint, as the cow will then throw herself down. J. Y. N.

Norton, May, 1859.

QUINCE BUSHES.

Please inform me how I can make my quince bushes bear? They blossom well, but yield no fruit. AARON BRIGHAM.

Holliston, April, 1859.

REMARKS.—There is no prescription specially applicable to your question. Perhaps the soil is too rich, and they make too much wood; perhaps it is not rich enough. If they appear very luxurious, head them in, and remove some of the soil about one of them, and supply it with sand or clay.

HOW TO PREVENT CROWS FROM PULLING CORN.

Take two ounces of nitre to a peck of corn, dissolve the nitre in half the quantity of boiling water wanted to cover the corn, then add as much beef brine, and soak the corn from twelve to twenty-four hours, then roll in plaster, or dry ashes. I have followed this method for more than five years, and have suffered no loss from crows. R. A. DAMON.

Ripton, April, 1859.

HUNGARIAN GRASS.

In your last issue, I noticed an account of Wm. Richards raising Hungarian grass, but he gave no account of the quantity of land he sowed. Will Mr. R. give us all the information he can about sowing and harvesting it; and what stock he thinks best to feed it to, and whether he will feed the seed clear or mixed with other grain, and what he thinks it worth compared with corn or oats, and oblige A YOUNG FARMER.

Brandon, Vt., April 23, 1859.

H. E. FITCH, *Clarence, Nova Scotia.*—We are not able to give you the information you desire, without occupying an amount of time which we cannot at present command.

For the New England Farmer.

SUPERPHOSPHATE OF LIME FOR SQUASHES.

As the time is near at hand for planting, I deem it advisable to tell my experience in relation to my use of the superphosphate of lime in preserving the vines of the autumn marrow squash. I have used the superphosphate lime for two years with perfect success, and obtained large crops of that delicious vegetable without losing a vine. Before I put on the superphosphate I could not raise a single squash, on account of the worm in the vine near the root. It usually commenced its ravages about the time that it fruited. The vines would look well, yet in two days they would all wilt away, but by the use of the superphosphate of lime I am able to save every vine, and get full crops of squashes. I commence putting it on them as soon as the seed comes up, to keep off the small black beetle, which is does to per-

fection, and then to keep off the striped bug, also to keep off the stinking pumpkin bug, which it is sure to do. I put on a small quantity after every rain and every hoeing and when they begin to put forth runners, I put about a tablespoonful around the root, and in all cases, where it has been used properly, it has insured a good crop.

Be sure and get that which is good; there has been a great quantity of poor stuff in the market which has disappointed the expectation of the consumer. I have used it on tomatoes with great success. It should not be put on melons nor cucumbers, it is too caustic for them, and kills the tender plants.

Farmer James, by the use of the superphosphate of lime, raised acres of fine marrow squashes where he had totally failed for years, before he knew of this infallible remedy. Farmers try it. S. A. SHURTLEFF.

Spring Grove, April 13, 1859.

LIVE FOR SOMETHING.

Live for something, be not idle,
Look about thee for employ;
Sit not down to useless dreaming—
Labor is the sweetest joy.
Folded hands are ever weary,
Selfish hearts are never gay;
Life for thee hath many duties—
Active be, then, while you may.

Scatter blessings in their pathway!
Gentle words and cheering smiles
Better are than gold and silver,
With their grief dispelling wiles.
As the pleasant sunshine falleth,
As the dew descends on earth,
So let thy sympathy and kindness,
Gladden well the darkened hearth.

Hearts there are oppressed and weary;
Drop the tear of sympathy—
Whisper words of hope and comfort—
Give, and thy reward shall be
Joy unto the soul returning
From this perfect fountain head,
Freely, as thou freely givest;
Shall the grateful light be shed.

For the New Enand Farmer.

HOW TO TREAT A YOUNG ORCHARD.

MR. EDITOR:—I have read your remarks in the last *Farmer*, (weekly,) with much interest, on the manner of treating a young orchard. If manured sufficiently to produce two crops of clover and a crop of rowen to turn in after the second year's cutting is removed, a fine growth of the trees may be expected.

But let us suppose the soil is very gravelly and poor; the orchard large, and only manure enough for a very moderate dressing can possibly be scraped together, might not the trees be kept in a growing condition by applying to each tree, of eight or ten years' growth, say one-eighth of an ox-cart load of a good compost manure? Let this manure be spread at some distance from the body of the tree; little or none of it coming within 3 or 4 feet of it, but the main part of it above and a little beyond the extremities of the roots. Let the ground between the trees be plowed, cultivated with cultivator, and harrowed to keep down the weeds. No crops taken off until more manure can be spared.

Might not such treatment as this be more economical than purchasing manure enough to fill a very poor soil with clover roots? In very poor soils, by digging holes 7 feet in diameter and 2 feet deep, and filling with loam and meadow mud, trees may be kept in good condition two or three years, with no other application than a little coarse, straw, yard manure, put around the body at setting, (if set in the spring,) and dug in next season. If then, after that, a moderate quantity of manure is spread near the trees, each year, together with a liberal supply of swamp muck, plowing and harrowing *without* cropping, and an occasional liberal supply of manure *with* cropping; I say, if by these means, trees can be kept growing, might not much land, especially in the vicinity of villages, now comparatively useless, be profitably turned to orcharding, thus increasing its value, improving its appearance, inviting new settlers, and paving the way for a plentiful supply of fruit?

One question more: Would occasionally turning in a green crop of oats or buckwheat be economical where a yearly supply of manure is with difficulty obtained? E.

Framingham, March 15, 1859.

REMARKS.—The suggestions of our correspondent are valuable, and do not seem to require any special comments or replies from us. If he plows in a crop of oats or buckwheat, he will derive much more benefit from it by mowing the crop and allowing it to partly dry before plowing it under.

For the New England Farmer.

EXPERIMENT WITH POTATOES.

MR. BROWN:—Nothing at the Lunenburg Cattle Show, last year, interested me so much as the exhibition of fine specimens of potatoes. And nothing in this department seemed so valuable as an account of an experiment in raising them, given by DANIEL PUTNAM, Esq., a member of the Lunenburg Farmers' Club. The following is the result of the experiment:

Lot 1.—3 large potatoes, weighing 2 lbs. 12 ozs. Whole potatoes in the hill; product of 8 hills, 36½ lbs.
Lot 2.—3 large potatoes weighing 2 lbs. 12 ozs. Cut 4 pieces each, 4 pieces to a hill; produce, 42 lbs.
Lot 3.—4 large potatoes, weighing 1 lb. 6 ozs. Cut 4 pieces each, 2 pieces to a hill; produce, 32 lbs.
Lot 4.—2 large potatoes weighing 11 ozs. Cut 4 pieces each, 1 piece to a hill; produce, 25 lbs.
Lot 5.—8 small potatoes weighing 13 ozs. Whole potatoes in the hill; produce, 25 lbs.
Lot 6.—8 small potatoes weighing 13 ozs. Cut 2 pieces, 2 pieces in a hill; produce 33 lbs.
Lots 7 and 8—Planted with the eyes cut out, proved failures.
Kind of potatoes used, Jenny Linds.

This experiment needs to be analyzed, in order to communicate fully its valuable lessons.

In lot No. 1, 44 ozs. produce 584 ozs., equal to 13 bushels for one; rather a small yield. An acre, planted in rows 3 feet, and hill 2½ feet apart, would produce 470 bushels, requiring 36 bushels of seed.

In lot 2, 44 ozs. produce 672 ozs., equal to 15

bushels for one. An acre planted at the same distances as the last, would produce 540 bushels, requiring 36 bushels of seed.

In lot 3, 22 ozs. produce 512 ozs., equal to 23 bushels for one. An acre planted 3 × 2½ feet would produce 412 bushels, requiring 18 bushels of seed.

In lot 4, 11 ozs. produce 400 ozs., equal to 36 bushels for one. An acre, planted 3 × 2½ feet, would produce 322 bushels, requiring 9 bushels of seed.

In lot 5, 13 ozs. produce 400 ozs., equal to 30 bushels for one. An acre planted 3 × 2½ would produce 322 bushels, requiring 13 bushels of seed.

In lot 6, 13 ozs. produce 528 ozs., equal to 40 bushels for one. An acre planted 3 × 2½ would produce 425 bushels, requiring 10 bushels.

It will be seen, therefore, that potoates planted as in lots 1st and 2d, the entire produce is greatest, but the amount of seed demanded is enormous. In lots 4th and 6th, the produce is quite large, and the amount of seed is the smallest.

Shall we, then, use the large potatoes or the small? I answer, if a man has little land and a plenty of large potatoes for seed, let him plant them, either whole or cut in four pieces, and four pieces put in the hill. If, however, he has much land and but few seed potatoes, let him use the small ones, cut in two pieces, and two pieces put in the hill. W. C.

Clinton, Ms., 1859.

REMARKS.—The attention of Mr. Baylies, of Taunton, is respectfully called to this article.

For the New England Farmer.

MIGRATION OF SWALLOWS.

Quite a number of articles have appeared in the *Farmer* within the last few years, relative to the habits of swallows, and the time of their migration, but I do not recollect that any account from this region has appeared. I will therefore relate the result of my own observations, made last fall.

About the 21st of the 7th month, 1858, these lively summer birds began to congregate in considerable numbers upon the telegraph wires, and the roofs of barns. These meetings were held daily, and their numbers continued to increase. Soon it became apparent that some important event was about to take place. Sometimes large companies would commence an incessant chattering, very much resembling a set of politicians when discussing some momentous question, in the result of which all are expecting to be benefited. Presently all would rise, and after performing certain gyratory evolutions, would return to their places.

The multitude then assembled were nearly all common barn swallows, and about the 30th of the month they left for parts unknown.

The 13th of the 8th month I saw large numbers of the *white-bellied* swallows assembled on the "*wires*," but on the 14th very few were seen. All did not leave, however, for some of this variety, and a few of the former, were seen as late as the 6th of 9th month, though they were evidently young ones. A few chimney swallows were observed the 16th of 8th month.

The 2nd of 9th month I saw from fifty to sixty white-bellied swallows in a distance of about two and a half miles, 23 in one flock, and upwards of 30 in another; a few barn swallows were with them. A considerable portion of the whole were scarcely full-fledged. In another place I saw a large number, probably more than a hundred, on a dead tree by the side of a mill-pond. They performed various evolutions, such as they usually do when collected in other places. I have no idea that they were preparing to take a dive into the mud. They are too lively and too beautiful to hybernate in such quarters. It is much more reasonable to suppose they were preparing for a long journey, and that they soon took their flight to more genial climes. The 6th I saw thirteen swallows of the same variety as the last, and I do not recollect that I saw any after that day.

Bloomfield, C. W., 1859. L. VARNEY.

For the New England Farmer.

POTATO ROT.

MR. EDITOR:—Among all I have read on this subject, I do not recollect any description of the attending circumstances, or, as a physician would say, any statement of the "symptoms." And, it appears to me that it is misapprehending or overlooking these, which has led to such a variety of opinions relative to the cause; I mean, when the rot prevails so as to constitute an epidemic. I have observed, somewhat particularly, these attending circumstances, and I have noticed that they were essentially alike, every year the rot has prevailed. The disease commences its ravages the last half of August, usually; sometimes, between the first and tenth of September. The potato vines are green and luxuriant, and the tubers unripe. The thermometer ranges from seventy-six to eighty degrees in the shade; the wind southerly, usually south-west, and blows very briskly; there is more or less rain—not often a great quantity; frequently only a heavy mist, sometimes attended with fog. Such, according to my observation, have uniformly been the symptoms attending the potato disease. If we have a cold rain, or hot, dry weather, or if the potato vines are dead and the tubers ripe, I have never known the rot to prevail. In the same field I have had early potatoes by the side of late ones; the former were uninjured, the latter rotted badly. Last year, I planted a part of my early potatoes quite late, the last of May; the last of August, when the rot commenced, the vines were growing, were very green, the tubers were unripe, and they were diseased worse than any other kind I raised; while those that were planted early, were unaffected; and, indeed, I had never had this kind, (early blues,) rot before.

The mischief to the potato, under the above circumstances, is done very suddenly. I have noticed the tops to begin to wilt and turn black in a few hours, and the tubers to be affected, after the first indications appeared. The conclusion to which I came, the second year the rot prevailed, was, that it was produced by atmospheric influence, combined with the circumstances mentioned above; the juice of the top is poi-

soned, or converted into a gangrene, which kills the top, and descends to the tuber, producing disease and decay.

If the above is correct, then it overthrows the bug theory, which has been so confidently advanced. But the advocates of that theory will ask me, probably, why we never witnessed such effect from the atmosphere prior to 1843? I can answer them only in the Yankee fashion, by asking them why we never had such bugs before that year? Was that bug created then? Or was it brought into existence by a cross between two previously existing genus? Or if the bug existed previously to 1843, were its habits so changed that it ceased to feed on what it could not poison, and commenced living on the potato? But it seems this is only a microscopic bug, i. e., imperceptible to the naked eye. Every effect must have an adequate cause. Can so small a bug produce such effects as to cause thousands of bushels of potatoes to rot? I have no doubt the microscope reveals animalculæ living on potatoes; it does preying upon the thigh of a gnat, and floating in the purest water. But I would as soon believe that the ox, which died after drinking, was killed by the animalculæ, which the microscope revealed in the water from which he drank, as to believe the potato rot is produced by the animalculæ which the microscope exhibits living upon them. The cause is not adequate to the effect. Atmospheric changes, we know, are frequent, and at times very great; sometimes producing diseases entirely new in their type, which carry off thousands of the human family; and why not new diseases in the vegetable kingdom?

The only remedy I have discovered, is to plant an early kind, plant early, and on early ground, so they may mature early. If the vines are dead and the potatoes ripe by the 20th of August, you will not lose many by the rot. S. H. P.

Leominster, 1859.

For the New England Farmer.

NATIVE BREED OF CATTLE.

REMARKS BY COL. PICKERING.

It should be constantly borne in mind, that the Society has been formed for the purpose of effecting improvements in every branch of husbandry. Chance in breeding, or a lucky purchase, may give a farmer a superior cow, but unless her offspring be raised, we shall make no advance; and fifty years hence, the quality of our neat cattle will not be improved. It is true, that fine cows and fine bulls do not always produce an offspring equal to themselves; but the high probability is in their favor. Hence the high prices given for the improved imported breeds, like generally producing like. Many are willing to raise a cow calf from a superior cow; while they are regardless of a bull calf. To an improving farmer, the latter is more valuable than the former. The offspring of the female is very limited; whereas the male may be the sire of hundreds. The heifers from fine cows so often prove worthless, because the cows are put to worthless bulls. How different is the conduct of the breeders of horses! No one expects a fine colt unless from a good mare, when sired by a horse of distinguished excellence. The same law of nature exists among neat cattle, as among horses; and whosoever disregards it, may look for disappointment. Farmers will therefore be expected to raise the offspring of cows, both male and female, to which first premiums have been awarded, and in this way alone may they hope to improve their stock. He that relies upon chance, to the neglect of experience, will chance to be disappointed.

"Them are my sentiments."

"MULTUM IN PARVO."

For the New England Farmer.

SLATE VS. STOCK JOBBERS.

MR. EDITOR:—I have noticed several articles in the *New England Farmer* about slate roofing. Not being a manufacturer of slate, it may be possible for me to give some information, without expecting to have my *pockets stuffed with the proceeds* of certain certificates of stock. Disinterested persons might *possibly* suspect "Rusticus" to be an owner of Glen Lake stock, from the zeal he manifests in building up that enterprise, and ignoring all others. If he wishes to advertise his quarry, let it be done *openly*. The public want facts and experience, instead of theory and stock jobbing. This same public have paid thousands of dollars to speculators for stock in slate and mining corporations, having immense nominal capitals, high sounding titles, and owning a *very few acres of pasture land with a rock upon it.* If this money was judiciously expended upon real quarries or mines, instead of being absorbed by the managers, stockholders would have less reason to complain. Let capitalists examine for themselves, before making investments in any such corporations. I do not wish to apply these remarks to Glen Lake, as I am entirely unacquainted with their financial operations; wishing them success in any honorable measures for building up this important branch of business. The course taken by "Rusticus" would create a distrust of all kinds of slate. Having examined most of the Vermont slate quarries, and *practically tested* several of them upon *my own buildings*, I consider them generally valuable. The absorption of funds necessary for opening quarries, erecting buildings and machinery, being so large, the means of the owners, in many instances being very limited, and the desire for quick returns so strong, that often surface or unsound stock has been manufactured and sold. Disintegration is therefore certain. Why do some slates change color or fade, while others are fast colored? Iron and sulphur enter into the composition of the former. Copper is the metallic base of the latter. The one rusts, the other brightens. The copper slate will withstand a greater degree of heat than the iron slate, without cracking. Slate varies in hardness in the different quarries. In all instances within my knowledge the softer stock (as in other stone quarries) hardens by exposure. The softer slate are usually the finer grained. The harder the slate, the thinner it will split, provided it is free. I prefer slate of a medium thickness and size. Slaters and owners often advise the use of thin slate, as it saves them expense in transportation.

I have roofs covered with slate from Col. Allen's quarry of *mottled slate*, (probably the one mentioned by "Rusticus,") from the Western Vermont Slate Company's quarry of *fast and one colored slate*, (annihilated by "Rusticus,") and from the quarries of the Eagle Slate Company, to whose skirts "Rusticus" endeavors to fasten Glen Lake. These three quarries represent the different varieties mentioned, and are those *most extensively worked* for roofing slate. All have a wide reputation, and have been unable to supply the demand upon them. Their owners have devoted their energies to the building up of the trade, and sustaining instead of destroying each other. The mottled slate has been laid upon my roof *six years*. It exhibits no sign of disintegration or change of color. I have examined roofs covered with this slate in 1848 and '49, which are now in good condition. The slate from the quarry of the Western Vermont Slate Company has been laid nearly six years. It presents the same beautiful purple color as at first, and exhibits no sign of disintegration. Roofs covered with this slate in 1850 and '51 are now in good condition. The slate from the Eagle quarry has been laid four years, and gives good satisfaction. Although it has changed color badly, there are no signs of disintegration. Some veins of slate in this quarry do not change color as much as others, it splits freer than the others mentioned. There can be no doubt about the durability of all these varieties. The quality of slate manufactured from these and other younger quarries is gradually improving, both in material and workmanship. For cottages and roofs which are conspicuous, a fast colored slate would no doubt improve their appearance materially, but in many instances the owners have no preference as to color. No Vermont slate will absorb sufficient water to injure it. I have experimented, and found that slates from the same quarry vary in the quantity absorbed. In conclusion, let me advise your numerous readers to use slate upon their roofs. It is economical, safe and durable. Give a sufficient underlap, and nail firmly. They require but trifling repairs and have often proved a safeguard against conflagration. PRO BONO PUBLICO.

For the New England Farmer.

THE ADVANTAGE OF FORMING HABITS OF INDUSTRY EARLY IN LIFE.

MR. EDITOR:—As far as my observation extends, children are naturally disinclined to persevere in steady labor; their restless and active propesities are manifested in every variety of antics, in preference to doing the dreaded—what is called—work; they will make efforts at what they consider to be play, which in an adult would be considered most severe labor; they will lug a heavy sled up a steep hill in anticipation of the pleasure of riding down, frequently to the risk of their lives. These feelings seem to be natural to all active children. When these active, propelling powers are directed in the right channel, as the child advances in years, the habits of useful industry are formed, or become what is called second nature.

When parents neglect the opportunity of directing these natural propensities to activity in their children, at an early age, and let them grow up without any definite plan of business for life, they will compare with training four-year-old steers to the yoke, and instead of making of them good, industrious citizens, "ten to one" if they do not imbibe the habits of idleness and rowdyism, and at best make an addition to that class of characters, in all conscience already numerous enough, who have no definite object in view, but are ready to improve every opportunity to speculate upon the industry of others, make grabbing trades, and if satisfactory success does not attend such *respectable* efforts at business, they have an eye more directly to a fortune at the gambling table, or "investigating" the pockets of ladies and gentlemen; peradventure a fortune may be there.

"How can the Ethiopian change his skin, or the leopard his spots;" or how can the child, grown up in idleness, become accustomed to habits of useful industry? It is a hard case, nothing is more difficult than correcting bad habits and forming good ones. The colored preacher said his converts "would vart back again," and so it is apt to be with those grown up in the natural way.

It was with the greatest difficulty that the aborigines of this country could be induced to perform any kind of manual labor; the horrors of starvation, or the pleasure of indulging a craving appetite with food, were not motives sufficiently powerful to induce them to forsake their old habits of indolence, and casting off thought for the future.

I have no doubt but there have been instances of reformation among adults who have never been taught the habits of industry, but such instances are as uncommon as conversions at the eleventh hour. I have known many instances of these hopeful characters who knew more than father and mother combined, that grew up without a trade, and ultimately proved an affliction to their parents and all concerned. A neighbor of mine possessed one of these promising loafing sons, and a friend of the father inquired why he did not set his son to work; the father replied, "O, let him alone, he will do well enough when he grows older." The fact was, he had already got to be too old for his father; he got married, ill treated his wife and left her, enlisted into the army, (the best place for him,) and finally died a vagabond in the poor-house.

We often see the effects of early habits of industry in examples of aged people who have been so long accustomed to a diligent business life, that working seems almost as necessary to their existence as their daily bread, and when the time arrives that deprives them of the enjoyment of their favorite employment they feel a melancholy vacancy in their minds which approaches nearly to unhappiness. There are numerous instances of men of wealth who, having become weary of business, and retired from it under the impression of living easier lives, after gratifying themselves with a full supply of imaginary happiness in the anticipated leisure, have returned again to their toils as less burdensome than the pleasure of doing nothing. I have heard young people say they wondered why old people need work; that they had property enough to carry them through, and that they might sit down and enjoy themselves.

Now, young man, I wish you would tell me what enjoyment there is in doing nothing? I have every reason to believe that heaven is not the place for idlers, that happiness there consists in the employment of doing good, one toward another, and progressing in knowledge and perfection forever. What is a soul without a motive, any more than an idiot or brute, or what happiness and enjoyment can there be without action; the enlightened soul was made for enjoyment in working good, not for doing evil, nor continuing in a torpid state of idleness like the bear in the winter. A love of industry at any kind of business must be created by early instruction and practice, while the child readily receives impressions which will be lasting, and habit will soon overcome the propensity to idleness, and if he is organized with the elementary ingredients of a man, he will love work better than play. Every farmer that produces grain and vegetables, and every mechanic who makes a shoe or any useful implement, is doing good, loving his neighbor, and obeying and serving God, I suspect, more acceptably than many do in offering him their artificial prayers. SILAS BROWN.

North Wilmington.

For the New England Farmer.

PRODUCT OF TEN COWS.

GENTLEMEN:—I send you a table of figures showing the product of a small dairy of ten cows, for one year ending with May, 1858. The cows are of common stock, costing from $25 to $30 each; fed liberally with straw and wheat bran and corn meal in winter, and with bran and good pasturage in summer. Feed has been given them dry and cold; and the stable open enough to be well aired and cool. Cows only housed in winter. The sales are, of cream at $1 per gallon, to confectioners; and skimmed milk, at 12 cents per gallon, to boarding houses.

SALES FOR WEEK.

June 5, 1857	24.24	Dec. 5,	25.71—676.45
12,	25.67	12.	23.22
19,	20.92	19,	24.40
26,	20.51	26,	22.25
30,	13 26—104.60	Jan. 2, 1858	20.68—123.26
July 7,	27.26	9,	22.06
14,	27.60	16,	23.78
25,	34.22	23,	21.80
Aug. 1,	31.93—121.01	30,	19.20— 86.84
8,	31 15	Feb. 6,	17.48
15,	30.45	13,	17.84
22,	20.81	20,	19.72
29,	28.65—111.06	27,	19.84— 74.88
Sep. 5,	27.93	Mar. 6,	15 60
12,	33.78	13,	17.72
19,	44 10	20,	17.56
26,	27.84	27,	18.20— 69.08
Oct. 3,	21.58—155.23	Apr. 3,	18.44
10,	25.89	10,	23.81
17,	27.16	17.	17.45
24,	18.70	24,	18.41
31,	25.42— 97.17	May 1,	22.34—100.45
Nov. 7,	24.04	8,	27.42
14,	21.08	15,	34.74
21,	19.48	22,	28.54
28,	22.78— 87.38	29,	33.59—124.29
	$676.45		$1,258.25

Cincinnati, Ohio. WM. J. FERN.

☞ It has been estimated by Dr. Lee, of Georgia, that the annual income of the soil of not less than one hundred millions of acres of land in the United States is diminishing at the rate of ten cents an acre.

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

LOAF OF TEA CAKE.—One cup of sour milk, one cup sugar, one tea-spoonful rose-water, a little nutmeg, one table-spoonful of butter, one tea-spoonful of soda, one and a half cups flour.

DEBORAH'S BATTER PUDDING.—Sixteen table-spoonsful of flour, one quart of milk, six eggs, salt, beat the eggs to froth on a plate, and after it is mixed beat it fifteen minutes. Either boil or bake.

NEWTON SHORT GINGERBREAD.—Eight cups flour, three cups sugar, one of ginger, one of butter, six eggs, one tea-spoonful of soda.

STEAM PUDDING.—Three cups of flour; one cup of suet; one cup of molasses; two cups of milk; one tea-spoonful bicarbonate of soda. Chop the suet very fine, put it in the flour with the other ingredients, and steam it two hours. To be eaten with lemon dip.

LEMON DIP.—Thin two table-spoonsful of flour with water; stir it into a pint of boiling water; let it boil once; take it up and stir in four table-spoonsful of sugar, a little butter and the juice of one lemon.

PLUM PUDDING.—One stale brick loaf—take off the brown crust, cut it in thin slices, and spread them with butter; pour over it one quart of boiled milk, and let it stand until morning; grate in one nutmeg, one tea-spoonful of salt, eight eggs well beaten, a pint bowl of stoned raisins; flour the raisins and bake two hours. To be baked immediately after putting in the raisins and eggs.

SWISS CAKE.—One and a half cupsful of sugar, four table-spoonsful of butter, one cupful of milk, three cupsful of flour, two eggs, one tea-spoonful of soda and one and a half tea-spoonsful of cream of tartar. Flavor to your liking.

NICE AND NAMELESS CAKE.—Two cupsful of sugar, a small lump of butter, half a pint of milk, four eggs, one cocoa nut, grated, a tea-spoonful of soda and two tea-spoonsful of cream of tartar.

COCOA NUT CAKES.—Two grated nuts an equal weight of powdered white sugar, the whites of three eggs, well beaten; make them the size of a half-dollar, and bake on buttered tins.

BREAD CAKE.—Five teacups well raised bread dough, three heaping cups of sugar, two even cups of butter, five eggs, a glass of brandy, and a nutmeg; fruit as you like.

YEAST FOR BREAD OR CAKES.—In a quart of boiling water stir sufficient wheat flour to make quite a thick batter; while hot, stir in it four ounces of white sugar and a teaspoonful of salt. When cold, put in sufficient yeast (say near a teaspoonful) to cause the mass to ferment. Lay it by in a covered jar for use. Half a teacupful is enough to make two large loaves. To renew the yeast when used up, reserve a teacupful. It is simple and efficient for raising buckwheat cakes and bread—very white and very light, if the flour is good.